THE MAGAZINE OF

Fantasy AND Science Fiction

11th Anniversary

ALL STAR

ISSUE

OCTOBER . 40¢

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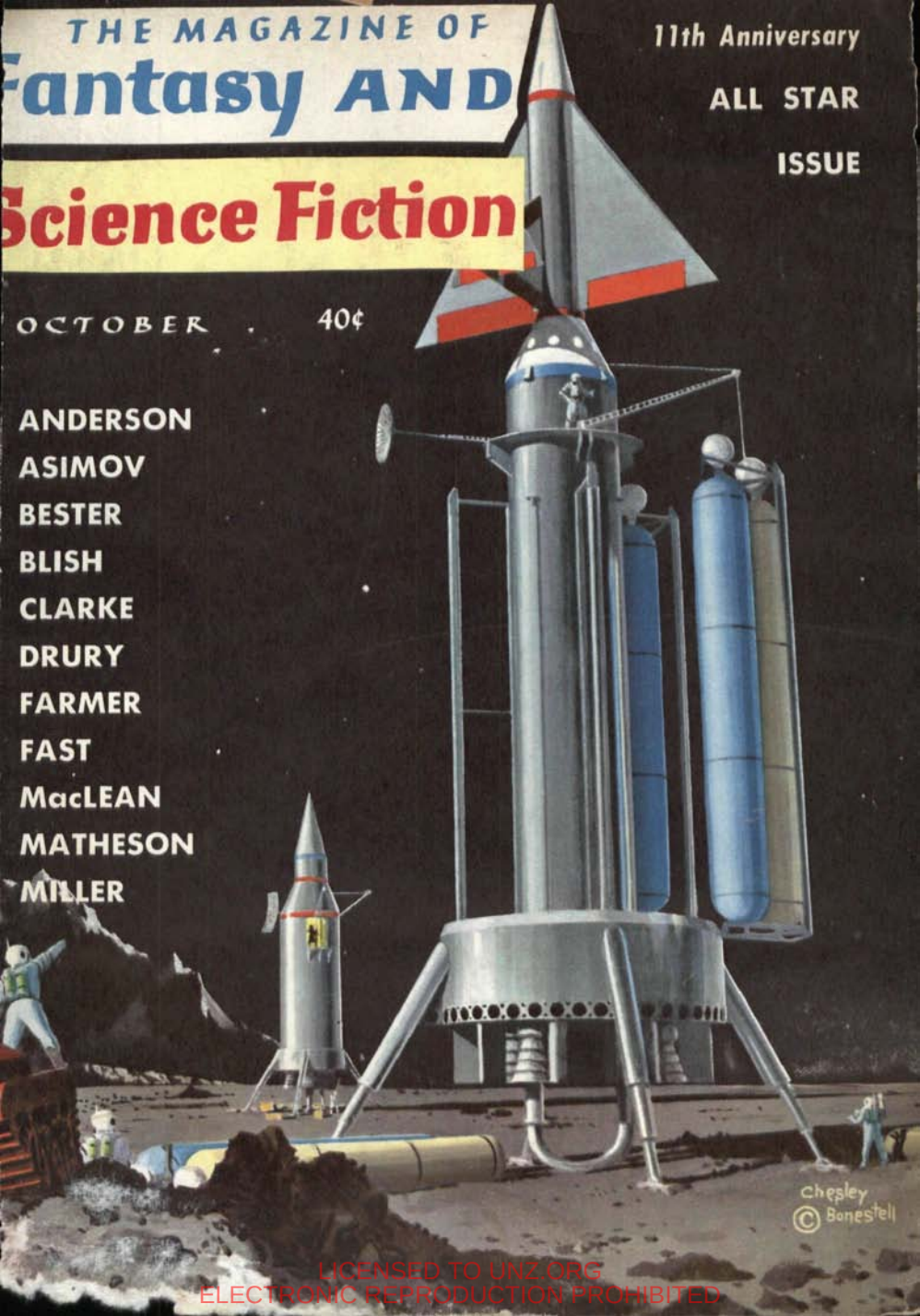

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Fantasy and Science Fiction

OCTOBER *Including Venture Science Fiction*

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Cover by Chesley Bonestell
(Unloading empty fuel tanks on the moon)

Joseph W. Ferman, PUBLISHER *Robert P. Mills*, EDITOR

The Magazine of Fantasy and Science Fiction, Volume 19, No. 4, Whole No. 113, OCT. 1960. Published monthly by Mercury Press, Inc., at 40¢ a copy. Annual subscription $4.50 in U. S. and Possessions, and Canada. $5.00 in the Pan-American Union; $5.50 in all other countries. Publication office, Concord, N. H. Editorial and general offices, 527 Madison Avenue, New York 22, N. Y. Second class postage paid at Concord, N. H. Printed in U. S. A.

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In this issue . . .

The Science column conducted by our Good Doctor Asimov draws more reader mail than anything else we publish (with a few controversial exceptions). The result, for the Doctor, is ideas for new articles, a certain amount of basking in the bright sun of approval from out there, the occasional necessity of an apology for some minuscule error, and some afterthoughts, such as those expressed in the following auctorial note:

In "Beyond Pluto" (July 1960), I suggested the name Charon for a possible tenth planet, with Cerberus for its possible chief satellite, after the ferryman who brought the souls of the dead to Hades, and the three-headed dog who guarded the gate. Jim Blish, however, favors Persephone (or Proserpina) as the name, she being the consort of Pluto. I had favored reserving that for a possible satellite of Pluto, but Jim scouts the possibility of any reasonably sized satellite for that planet, and he is probably right to do so.

Meanwhile a fan named Daniel J. Alderson writes to say that a possible name for the tenth planet is Erebus, the god of darkness, while its satellite should be Nyx, the consort of Erebus, and the goddess of night. For the eleventh planet, he goes on to suggest the name of Chaos, the father of Erebus and the personification of the original stuff out of which the Universe was made. As for the satellite of Chaos, he thought it might be named Order, that being what was brought out of Chaos by the act of creation. However, the Greek opposite of Chaos, is Cosmos, and I now have another reason for wanting an eleventh planet and its satellite to be discovered. I think there is a certain roll to the phrase: "Coshos, satellite of Chaos."

Coming soon . . .

Our October 1958 All Star Issue proved to be so popular that we repeated the formula last year and this. It is true that the established, "name" writer must have rewarding talents to have achieved his name; it is also true that there are many unestablished writers with exciting things to say, and the skills to say them well. Early issues will include stories by such established favorites as Clifford D. Simak, Poul Anderson, and John W. Vandercook—they will also include striking stories by a number of less known writers who may well be the stars of the future.

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Winner of last year's Hugo for the best science fiction novel (A CASE OF CONSCIENCE), *and this year's Guest of Honor at the 18th World Science Fiction Convention, James Blish here draws upon his experience in the public relations end of pharmaceuticals to tell a story of certain important medical problems that would be likely to arise after the Day.*

THE OATH

by James Blish

REMEMBERING CONSCIENTIOUSLY to use the hand brake as well as the foot, Dr. Frank Tucci began to slow down toward the middle of the bridge, examining the toll booths ahead with a cold eye.

He despised everything about scouting by motor scooter, though he agreed, when forced to it, that a man on a scooter made the smallest possible target consistent with getting anywhere—and besides, it conserved gas, of which there was very little left. Most of all, he despised crossing bridges. It made him feel even more exposed than usual, and toll booths made natural ambushes.

These, however, were as deserted as they looked. The glass had been broken and the tills rifled. Without question the man who had taken the money had not lived long enough afterward to discover that it was worthless. Still, the looting of money was unusual, for there had been little time for it. Most people outside target areas had died during the first two days; the 48-hour dose in the open had averaged 9100 roentgens.

Naturally the small town ahead would be thoroughly looted of food and other valuables, but that was different. There was a physician in the area—that was the man Dr. Tucci had come all this way to see—and as usual, people would have drifted in again to settle around him. People meant looting, necessarily. For one thing, they were accustomed to getting 70 percent of their calcium from milk, and the only milk that was drinkable out here was canned stuff from before the Day. There might still be a cow or two alive outside the Vaults, but her milk would be lethal.

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There would be no more dairy products of any kind for the lifetime of anyone now living, once the lootables were gone. There was too much strontium-90 in the soil. The Nutrition Board had worked out some way around the calcium supply problem, Tucci had heard, but he knew nothing about it; that wasn't his province.

His province was in the valley ahead, in the large reddish frame house where, all the reports assured him, he would find another doctor—or somebody who was passing for one. The house, he noted professionally, was fairly well situated. There was a broad creek running rapidly over a stone bed not far away, and the land was arable and in cultivation: truck crops for the most part, a good acre of them, enough to supply a small family by today's starvation standards. The family was there, that was evident: two children in the four-to-seven age bracket—hence, survivors, both of them—were playing a stalking game in the rows of corn to which the other acre was planted.

Tucci wondered if the owner knew the Indian trick of planting pumpkins, beans and a fish from the stream in the same hill with the corn. If he didn't, he wasn't getting more than half as much from that acre as he might.

The position was not optimum for defense. Though the centrally located house did offer clear shots all around, anyone could have put it into siege almost indefinitely from the high ground which surrounded it. But presumably a doctor did not need to conduct a lonely defense against the rare roving band, since his neighbors would help him. A "neighbor" in that sense would include anyone within a hundred miles who could pick up a weapon and get to the scene fast enough.

Even a mob might pause before it could come to that. The first sight of the house it could have would be from here, looking down into the valley; and on the roof of the house, over green paint much streaked by repeated antifallout hosings, was painted a large red cross.

That would hardly have protected the owner during the first six months after the Day, but that had been more than a year ago. Things had settled somewhat since then. Initially a good deal of venom had expressed itself against doctors, when the dying had discovered that they could not be saved. That was why, now, rumors of the existence of a physician could bring Dr. Tucci two hundred bumpy miles on a rusty Lambretta whose side panels had fallen off, with a conspicuous five-gallon can of the liquid gold that was gasoline on his luggage rack, sweating inside a bullet-proof suit in whose efficacy he thoroughly disbelieved.

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He gunned the motor three times in neutral before putting the scooter back in gear and starting it slowly down the hill. The last thing he wanted to do was to seem to be sneaking up on anybody. Sure enough, as he clambered down from his perch onto the road in front of the house and lurched the scooter up onto its kickstand, he saw someone watching him from a ground floor window.

He knew that he was an odd sight. Short dumpy men look particularly short and dumpy on a motor scooter, and he doubted that his green crash helmet and dark goggles made him look any less bizarre. But those, at least, he could take off; there was nothing he could do, right now, about the putatively bullet-proof coverall.

He was met at the door by a woman. She was a tall, muscular blonde, wearing shorts and a halter, and a cloth tying up her hair in the back. He approved of her on sight. She was rather pretty in her own heroic fashion, but more than that, she was obviously strong and active. That was what counted these days—although animal cunning was also very helpful.

"Good morning," he said. He produced from his pocket the ritual gift of canned beans without which it was almost impossible to open negotiations with a stranger. "My name is Frank Tucci, from up north. I'm looking for someone named Gottlieb, Nathan Gottlieb; I think—"

"Thank you, this is where he lives," the woman said, with unusual graciousness. Obviously, she was not afraid or suspicious. "I'm Sigrid Gottlieb. You'll have to wait a while, I'm afraid. He's seeing another patient now, and there are several others waiting."

"Patient?" Tucci said, without attempting to look surprised. He knew that he would overdo it. Just speaking slowly should be sufficcient for an unsuspicious audience. "But it's—of course everything's different now, but the Gottlieb I'm looking for is a poet."

Another pause, he added, "Er . . . was a poet."

"Is a poet," Sigrid said. "Well, come in please, Mr. Tucci. He'll be astonished. At least, *I'm* astonished—hardly anybody knew his name, even Back Then."

Score one—thanks to the Appalachian Vaults' monstrous library. Out of a personal crochet, Tucci checked with the library each name that rumor brought him, and this time it had paid off. It never had before.

From here on out, it ought to be easy.

Nathan Gottlieb listened with such intensity that he reduced every other listener in Tucci's memory to little better than a catatonic. His regard made Tucci acutely aware of the several small lies

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upon which his story rested; and of the fact that Gottlieb was turning over and over in his hands the ritual can of beans Tucci had given Sigrid. In a while, perhaps, Gottlieb would see that it had been made *after* the Day, and would draw the appropriate conclusions. Well, there was no help for it. Onward and upward.

Physically, Gottlieb was small and gaunt, nearly a foot shorter than his wife, and rather swarthy. He looked as though, nude, you might be able to count all his bones. His somatotype suggested that he had not looked much plumper Back Then. But the body hardly mattered; what overwhelmed Tucci was the total, balanced alertness which informed its every muscle. Somehow, he kept talking.

". . . Then when the word was brought in that there was not only a settlement here, but that a man named Nathan Gottlieb was some sort of key figure in it, it rang a bell. Sheer accident, since the name was common enough, and I'd never been much of a reader, either; but right away a line came to me and I couldn't get rid of it."

"A line?"

"Yes. It goes: 'And the duned gold clean drifted over the forelock of time.' It had haunted me for years, and when I saw your name in the report, it came back, full force."

"As a last line, it's a smasher," Gottlieb said thoughtfully. "Too bad the rest of the poem wasn't up to it. The trouble was, the minute I thought of it, I knew it was a last line, and I waited around for two years for a poem to come along to go with it. None ever did, so finally I constructed one synthetically, with the predictable bad results."

"Nobody would ever know if you didn't tell them," Tucci said with genuine warmth. He had, as a matter of fact, particularly admired that poem for the two whole days since he had first read it. "In any event, I was sufficiently curious to don my parachute-silk underwear and come jolting down here to see if you were the same man as the one who wrote *The Coming-Forth*. I'm delighted to find that you are, but I'm overwhelmed to find you practising medicine as well! We're terribly short of physicians, and that happens to be my particular department. So all in all it's an incredible coincidence."

"That's for true," Gottlieb said, turning the can around in his hands. "And there's still a part of it that I don't understand. Who is this 'we' you mention?"

"Well. We just call it the Corporation now, since it's the last there is. Originally it was the Bryan Moving and Warehouse Corporation. If you lived in this area Back Then, you may remember our radio commercials on

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WASM-FM, for our Appalachian Mountain Vaults. 'Businessmen, what would happen to your records if some [unnamed] disaster struck? Put them in our mountain vaults, and die happy.' That was the general pitch."

"I remember. I didn't think you meant it."

"We did. Oddly enough, a good many corporation executives took us at face value, too. When the Day came, of course, it was obvious that those papers were going to be no good to anybody. We threw them out and moved in ourselves, instead. We had thought that would be the most likely outcome and had been planning on it."

Gottlieb nodded, and set the can on the floor between his feet, as though the question it had posed him was now answered. "A sane procedure, that's for sure. Go on."

"Well, since the Reds saturated Washington and the ten 'hard' SAC sites out west, we appear to be the only such major survival project that came through. We've had better than a year to hear differently, and haven't heard a whisper. We know that there were several other industrial projects, but they were conducted in such secrecy that the enemy evidently concluded they were really military. We advertised ours on the radio, and like you, they didn't believe that could be serious; or so we conclude.

"Now we're out and doing. We're trying to organize a—well, not a government exactly, since we don't want to make laws and we don't want to give orders—but at least the service functions of government, to help bring things into some kind of shape. Doing for people, in short, what they can't do for themselves, especially with things in their present shambles."

"I see. And how do you profit?"

"Profit? In a great many ways, all intangible, but quite real. We attract specialists, which we need. This indebts the community to us and helps us manage it better. It's a large community now, about as big as New York and Pennsylvania combined, though it's shaped rather more like Texas. How many people are included I can't say; we may try to run a census in a year or so. Every specialist we recruit is, so to speak, an argument for reviving the institution of government."

He paused, counted to ten, and added: "I hope you are persuaded. Now that I've found you out, I'd be most reluctant to let you off the hook."

Gottlieb said, "I'm flattered, but I think you're making a mistake. I'm still only a poet, and as such, quite useless. I'm the world's worst medical man, even in these times."

"Ah. Now that's something I've been burning to ask you. How *did* you get into this profession?"

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"Deliberately. When Sigrid and I got alarmed by all those Berlin crises, and then the summit fiasco, and decided to start on a basement shelter out here, I had to start thinking of what I might be able to do if we did survive. There wasn't any way to make a living as a poet Back Then, either, but I'd always been able to turn a marginal dollar as a flack—you know, advertising copy, the trade papers, popular articles, ghosting speeches, all those dodges. But obviously there wasn't going to be anything doing in those lines in a primitive world."

"So you chose medicine instead?" Tucci said. "But why? Surely you had some training in it?"

"Some," Gottlieb said. "I was a medical laboratory technician for four years in World War II—the Army's idea of what to do with a poet, I suppose. I did urinalyses, haemotology, blood chemistry, bacteriology, serology and so on; it involved some ward collecting too, so I got to see the patients, not just their body fluids. At first I did it all by the cookbook, but after a while I began to understand parts of it, and by God I seemed to have a feeling for it. I think most literary people might, if they'd just have been able to get rid of their notion that the humanities were superior to the sciences. You know, the pride of the professor of medieval Latin, really a desperately complicated language, in the fact that he couldn't 'do' simple arithmetic. Hell, *anybody* can do arithmetic; my oldest daughter could 'do' algebra at the age of nine, and I think she's a little retarded. Anyhow, that's why I chose medicine. Nowadays I understand why the real medicos had the interne system Back Then, though. There's nothing that turns you into a doctor like actually working at it, accumulating patient-hours and diagnostic experience."

Tucci nodded abstractedly. "What did you do for equipment, materia medica, and so on?"

"I don't have any equipment to speak of. I don't do even simple surgery; I have to be hyper-conservative out of sheer ignorance—lancing a boil and installing a tube drain is as far in that line as I dare to go. And of course I've no electricity. I've been reading up on building a dam across my creek and winding a simple generator, but so far the proposition's been too much for me; I'm not at all handy, though I've been forced to try.

"As for supplies, that was easy—just a matter of knowing in advance what I hoped to do. I simply looted the local drugstore the moment I came out of the hole, while everybody else who'd survived that long was busy loading up on canned goods and clothing and hardware. I was lucky that

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the whole dodge hadn't occurred to the pharmacist himself before the Day came, but it didn't. He hadn't even thought to dig himself a hole.

"I figured that anything I missed in the line of consumer goods would come my way later, if the doctor business paid off. And you'd be surprised how much of my medical knowledge comes from the package inserts the manufacturers used to include with the drugs. By believing a hundred percent of the cautions and contra-indications, and maybe thirty percent of the claims, I hardly ever poison a patient."

"Hmm," Tucci said, surpressing a smile only by a heroic effort. "How long will your supplies hold out?"

"Quite a while yet, I think. I'm being conservative there, too. In infectious cases, for instance, if I have a choice between an antibiotic and a synthetic—such as a sulfa drug—I use the antibiotic, since it has an expiration date and the sulfa drug doesn't. In another year I'm going to have to start doubling my antibiotic doses, but there's no use worrying about that—and I'll still have an ample stock of the synthetics."

Tucci thought about it, conscientiously. It was a strange case, and he was not sure he liked it. Most of the few "doctors" he had tracked down in the field were simple quacks, practising folk medicine or outright fakery to filll a gap left by the wholesale slaughter of specialists of all kinds, bar none . . . doctors, plumbers, farmers, you name it, it was almost extinct. Occasionally he had hit a survivor who had been a real physician Back Then; those had been great discoveries, and instantly recruited.

Gottlieb was neither one nor the other. He had no right to practice, by the old educational, lodge-brother or government standards. Yet obviously he was trying to do an honest job from a limited but real base of knowledge. The Vaults could use him, that was certain; but would they offer him the incentives they still reserved for the genuine, 24-carat, pre-Day M.D.?

Tucci decided that they would have to. This was the first case of its kind, but it would not be the last. Sooner or later they would have to face up to it.

"I think we can solve at least some of your problems," he said slowly. "So far as shelf-life of antibiotics is concerned, we keep them in cold storage and have enough to last a good fifty years. We have electricity, and we can give you the use of a great deal of equipment, as you learn how to use it: for example, X-rays, fluoroscopes, ECGs, EEGs. I think we need you, Mr. Gottlieb; and it's self-evident that you need us."

Gottlieb shook his head, slowly, but not at all hesitantly. It took

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Tucci several seconds to register that that was what he was doing.

"No," he said. "You're very kind. But I'm afraid it doesn't attract me."

The refusal was stunning, but Tucci was well accustomed to shocks. He drew a deep breath and came back fighting.

"For heaven's sake, why not? I don't like to be importunate, but you ought at least to think of what the other advantages might be. You could give up this marginal farming; we have a large enough community so we can leave that to experienced farmers. We use specialists in their specialties. You and your family could live in the Vaults, and breathe filtered air; that alone should run your children's life expectancy up by a decade or more—you know very well that the roentgen level in the open is still far above any trustable level, and if you came out of your hole in anything under three months—as I'm sure you did—you and your family have had your lifetime dose already. And above all, you'd be able to practice medicine in a way that's quite impossible here, and help many more people than you're helping now."

Gottlieb stood up. "I don't doubt a word of that," he said. "The answer is still no. I could explain, but it would be faster in the long run if you first took a look at the kind of medicine I'm actually practicing now. After that, the explanations can be shorter, and probably more convincing."

"Well . . . of course. It's your decision. I'll play it your way."

"Good. I've still got three patients out there. I'm aware that you yourself are a bona-fide physician, Dr. Tucci; you disguise it well, but not well enough. And you may not want me so badly when we're through."

The first patient was a burly, bearded, twisted man with heavily calloused hands who might always have been a farmer; in any event, everybody in the field was some kind of farmer now. He stank mightily, and part of the stench seemed to Tucci to be alcohol. His troubles, which he explained surlily, were intimate.

"Before we go on, there's something we have to get clear, Mr. Herwood," Gottlieb told him, in what subsequently proved to be a set speech for new patients. "I'm not a real doctor and I can't promise to help you. I know something about medicine and I'll do the best I can, as I see it. If it doesn't work, you don't pay me. Okay?"

"I don't give a damn," the patient said. "You do what you can, that's okay with me."

"Good." Gottlieb took a smear and rang a little hand bell on his desk. His 15-year-old daughter popped her head in through the swinging door that lead to the

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kitchen, and Gottlieb handed her the slide.

"Check this for gram-positive diplococci," he told her. She nodded and disappeared. Gottlieb filled in the time discussing payment with the patient. Herwood had, it turned out, a small case of anchovy fillets which he had liberated in the first days, when people were grabbing up anything, but nobody in his surviving family would eat them. Only tourists ate such stuff, not people.

The teen-ager pushed open the swinging door again. "Positive," she reported.

"Thanks, honey. Now, Mr. Herwood, who's your contact?"

"Don't follow you."

"Who'd you get this from?"

"I don't have to tell you that."

"Of course you don't," Gottlieb said. "I don't have to treat you, either."

Herwood squirmed in his straight-backed chair. He was obviously in considerable physical discomfort.

"You got no right to blackjack me," he growled. "I thought you was here to help people, not t' make trouble."

"That's right. But I already told you, I'm not a real doctor. I never took the Hippocratic Oath and I'm not *bound* to help anybody. I make up my own mind about that. In this case, I want to see that woman, and if I don't get to see her, I don't treat you."

"Well . . ." Herwood shifted again in the chair. "All right damn you. You got me over a barrel and you know it. I'll tell her to come in."

"That's only a start," Gottlieb said patiently. "That leaves it up to her. Not good enough. I want to know her name, so if she doesn't show up for treatment here herself, I can do something about it."

"You got no right."

"I said so. But that's how it's going to be."

The argument continued for several minutes more, but it was clear from the beginning that Gottieb had won it. . . . He gave the man an injection with matter-of-fact skill.

"That should start clearing up the trouble, but don't jump to conclusions when you begin to feel better. It'll be temporary. These things are stubborn; I'll need to see you three more times, at least. So don't forget to tell Gertie that I want to see her—and that I know who she is."

Herwood left, muttering blackly. Gottlieb turned to his observer.

"I see a lot of that kind of thing, of course. I'm doing my best to stamp it out—which I might even be able to do in a population as small and isolated as this," he said. "I don't have any moral strictures on the subject, incidentally. The old codes are gone, and good riddance; in fact, without widespread

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promiscuity I can't see how we'll ever repopulate the world before we become extinct. But the diseases involved cost us an enormous sum in man-hours; and some of them have long latent periods that store up hell for the next generations. In *this* generation it's actually possible to wipe them out for good and all—and if it can be done, it should be done."

"True," Tucci said non-committally. Thus far, he was baffled. Gottlieb had done nothing that he would not have done himself.

The next patient was also a man, shockingly plump, though as work-worn as his predecessor. Gottlieb greeted him with obvious affection. His symptoms made up an odd constellation, obviously meaningless to the patient himself; and after a while, Tucci began to suspect that they meant very little to Gottlieb, either.

"How did that toe clear up?" Gottlieb was saying.

"All right, fine, Nat. It's just that I keep getting these boils and all every time I hit a splinter, looks like. And lately I'm always thirsty, I can't seem to get enough water; and the more I drink the more it cuts into my sleep, so I'm tired all the time too. The same with food. People are talking, they sav I eat like a pig, and it's true, and it shows. But I can't help it. A bad name to have, these days, and me with a family."

"I know what you mean. But it's pretty indefinite now, Hal. We'll just have to wait and see what develops." Gottlieb paused, and quite surreptitiously drew a deep, sad breath. "Try to cut down a little on the intake, I'll give you some pills that will help you there, and some sleeping tablets. Don't hit the sleepy pills too hard, though."

Payment was arranged. It was only nominal this time.

"Are you aware," Tucci said when they were alone again, "that you've just committed manslaughter—at the very least?"

"Sure I am," Gottlieb said in a low voice. "I told you you would n't like what you saw. The man's a new diabetic. There's nothing I can do for him, that's all."

"Surely that's not so. I'm aware that you can't store insulin without any refrigeration, but surely there were some of the oral hypoglycemic agents in the stock you found at the drugstore—tolbutamide, carbutamide, chlorpropamide? If you don't recognize them by their old trade names, I can help you. In the meantime—well, at least you could have put the man on a rational diet."

"I threw all those pills out," Gottlieb said flatly. "I don't treat diabetics. Period. You heard what I told Herwood: I never took the Hippocratic Oath, and I don't subscribe to it. In the present instance, we're having a hard

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enough time with all the new anti-survival mutations that have cropped up. I am not going to have any hand in preserving any of the old ones. If I ever hit a hemophiliac, the first thing I'll do is puncture him for a test—and forget to put a patch over the hole. Do you remember, Dr. Tucci, that just before the Day there was a national society soliciting funds to look for a *cure* for hemophilia? When the Oath takes you that far, into saving lethal genes, either it's crazy or you are!"

"What would you have done with LaGuardia? Or Edison?" Tucci said evenly.

"Were they hemophiliacs?" Gottlieb said in astonishment.

"No. But they were diabetics. It's the same thing, in your universe."

After a long time, Gottlieb said, almost to himself:

"I can't say. It isn't easy. Am I to save every lethal gene because I suspect that the man who carries it is a genius? That may have been worth while in the old days, when there were millions of diabetics. But now? The odds are all against it. I make harder decisions than that every day, Dr. Tucci. Hal is no genius, but he's a friend of mine."

"And so you've killed him."

"Yes," Gottlieb said stonily. "He wasn't the first, and he won't be the last. There are not many people left in the world. We cannot tolerate lethal genes. The doctor who does may save one adult life —but he will kill hundreds of children. I won't do that. I never swore to preserve *every* life that was put in my hands, regardless of consequences. That's my curse . . . and my lever on the world."

"In short, you have set yourself up to play God."

"To *play* God?" Gottlieb said. "Now you're talking nonsense. In this village, I *am* God . . . the only god that's left."

The last patient was relatively commonplace. She had frequent, incapacitating headaches — and had earned them, for she had five children, two survivors and three new ones. While Gottlieb doled out aspirin to her (for which he charged a price so stiff—after all, there had been 15,670,944,200 aspirin tablets, approximately, in storage in the United States alone on the Day—that Tucci suspected it was intended to discourage a further visit), Tucci studied her fascies and certain revealing tics, tremors and failures of coordination which were more eloquent to him than anything she had said.

"There, that does it for today," Gottlieb said. "And with no more telephones, I'm almost never called out at night—never for anything trivial. I'll clean up and then we can talk further. You'll eat with us, of course. I have a canned Polish ham I've been saving

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for our first guest after the Dav, and you've earned the right to be that guest."

"I'd be honored," Tucci said. "But first, one question. Have you a diagnosis for the last patient?"

"Oh, migraine, I suppose, though that's about as good as no diagnosis at all. Possibly menopausal—or maybe just copelessness. That's a disease I invented, but I see a lot of it. Why?"

"It's not copelessness. It's glioblastoma multiforme—a runaway malignant tumor of the brain. At the moment that's only a provisional opinion, but I think exploration would confirm it. Aspirin won't last her long—and in the end, neither will morphine."

"Well . . . I'm sorry. Annie's a warm and useful woman. But if you're right, that's that."

"No. We have a treatment. We give the patient a boric acid injection—"

"Great God," Gottlieb said. "The side effects must be fierce."

"Yes, but if the patient is doomed anyhow? . . . After all, it's a little late in the day for gentleness."

"Sorry. Go ahead. Why boric acid?"

"Boron won't ordinarily cross the blood-brain barrier," Tucci explained. "But it will concentrate in the tumor. Then we irradiate the whole brain with slow neutrons. The boron atoms split, emitting two quanta of gamma radiation per atom, and the tumor is destroyed. The fission fragments are non-toxic, and the neutrons don't harm the normal brain tissue. As for the secondary gammas, they can't get through more than a layer of tissue a single cell thick, so they never leave the tumor at all. It works very well—one of our inheritances from Back Then; a man named Lee Farr invented it."

"Fantastic! If only poor Annie could have—" Gottlieb's mouth shut with the suddenness of a rabbit-trap, and his eyes began to narrow.

"Wait a minute," he said. "I'm being a little slow today. You said, 'We *have* a treatment'—not 'We *had*.' What you mean me to understand is that you also have an atomic pile. That's the only possible source of slow neutrons."

"Yes, we have one. It generates our electricity. It's clumsy and inefficient—but we've got it."

"All right," Gottlieb said slowly. "I'll go and change, and then we'll talk. But the purpose of my demonstration, Dr. Tucci, is what I mean *you* to understand; and I wish you'd think about it a while, while I'm gone."

The dinner was enormously pleasant; remarkably good even by the standards of the Vaults, and almost a unique experience in the field. Sigrid Gottlieb proved to be a witty table companion as well as an imaginative cook. Some of her

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shafts had barbs on them, for it was plain that she had overheard enough to divine Tucci's mission and had chosen to resent it; but these were not frequent enough, or jagged enough, to make Tucci believe that she was trying to make up her husband's mind for him. All well and good.

As for the children—the one prospect of the meal to which Tucci had not been looking forward, for as a bachelor he was categorically frightened of children—they were not even in evidence. They were fed in the kitchen by the eldest, the same girl who served as her father's laboratory technician.

There was no medical talk until dinner was over. Instead, Gottlieb talked of poetry, with a curious mixture of intensity and wistfulness. This kept his guest a little on guard. Tucci knew more than most surviving Americans about the subject, he was sure, but far less than he had pretended to know.

Afterwards, however, Gottlieb got directly to the point.

"Any conclusions?" he said.

"A few," Tucci said, refusing to be rushed. "I'm still quite convinced that you'd be better off with us. I'm not terribly alarmed by your odd brand of medicine—and I don't know whether you were afraid I would be, or whether you meant me to be. In the Vaults, we sometimes have to short-circuit the Oath too, for similar reasons."

"Yes, I don't doubt that you do. The Oath was full of traps even Back Then," Gottlieb said. "But I hoped you'd see that there's more to my refusal to join you than that. To begin with, Dr. Tucci, I *don't like medicine;* so I don't care whether I could do it better in the Vaults, or not."

"Oh? Well, then, you're quite right, I have somehow missed the point."

"It's this. You say you are so well organized that you can use specialists as specialists, rather than requiring them to do their own subsistence farming, policing and so on. But—could you use me *as a poet?* No, of course not. I'd have to practice medicine in the Vaults.

"But to what end? I really hate medicine. No, I shouldn't say that; but I'm certainly no fonder of it than I am of farming. I picked it as a profession because I knew it would be in demand after the Day—and that's all.

"In your Vaults I'd be an apprentice, to a trade I don't much like. After all, you're sure to have real MDs there, beginning with yourself. All of a sudden, I'd be nobody. And more than that, I'd lose control over policy—over the kind of medicine *I* think suitable for the world we live in now—which is the only aspect of my practice that does interest me. I don't want to save diabetics at your behest. I want to let them

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die, at mine. Call it playing God if you like, but nothing else makes sense to me now. Do you follow me?"

"I'm afraid I do. But go on anyhow."

"There isn't much farther to go. I'm satisfied where I am—that's the essence of it. My patients may not be as well served by me as they think they are, but all the same they swear by me and come back for more. And I'm the only one of my kind in these parts. I don't have to farm my place to the last square inch because most of my fees are in kind—which is lucky, because I have a brown thumb; Sigrid is a little better with plants, but not much. I don't have to fortify it, or keep a twenty-four hour watch, because my patients wouldn't dare let anything happen to me. I don't need the medical facilities, the laboratories and equipment and so on, that you're offering me because I wouldn't know how to use them.

"So of course I'll keep on the way I've been going. What else could I do?"

"I'm sure," Tucci said quietly, "that you'd find plenty of time in the Vaults to practice poetry as well—and many people who value it. I doubt that you find either, here."

"What of it? Poetry has been a private art for a century, anyhow," Gottlieb said bitterly. "Certainly it's no art for a captive audience, which wants to pat the poet on the head because it thinks he's really valuable for something quite different, like writing advertising copy, or practising medicine. I'm no longer interested in being tolerated. I wrote that off the day before the Day, and I'm not going back to it."

"But surely if—"

"Listen to me, Dr. Tucci," Gottlieb said. "If you are really running a sort of Institute for Advanced Study, and can promise me *all* my time to perfect myself as a poet, I'll go with you."

"Obviously, I can't make such a promise."

"Then I'll stay here. If I *have* to practice medicine, I may as well do so under conditions that I myself have laid down. Otherwise it would be too unrewarding for me to even tolerate. I wasn't really called to the vocation in the beginning, and there are times even now when it makes me quite sick. I can't help it; that's the way I am."

"So we have nothing more to say to each other, it seems," Tucci said. "I'm truly sorry that it worked out this way. I had no idea that the question would even arise; but, in a way, I'm on your side. And besides, were you to come with us, you'd leave your own people without a doctor—and though many of them would doubtless follow you into our community, there must be almost as many who wouldn't be able to do so."

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"That's true," Gottlieb said; but he said it with sort of convulsive shrug, as of a man who would dismiss the question and finds that it is not so easy as that. "Thank you anyhow for the offer. I must say that I feel a little like a boy getting a diploma; all this fakery, and now . . . Well; and it's run so late that you will have to spend the night with us. I don't want the Vaults to lose you on my account."

"I'm grateful for all your thoughtfulness—yours, and your wife's as well."

"Come back when you can," Gottlieb said, "and we'll talk poetry some more."

"Thank you," Tucci said inadequately." And that was all. He was guided up to bed, in the wake of a hurricane lamp.

Or was it all? In the insect-strident night, so full of reminders of how many birds had died after the Day, and how loaded with insensible latent death the black air that he breathed as he lay tense in the big cool bed, Tucci was visited by a whole procession of phantoms. Mostly, they were images of himself. Some of them were dismissable as nightmares, surfacing during brief shallow naps from which he was awakened by convulsive starts which made his whole body leap against the sheets, as though his muscles were crazily trying to relax in a single bound the moment sleep freed them from the tensions of his cortex. He was used to that; it had been going on for years, and he had come to take it as a sign that though he was not deeply asleep yet, he would be shortly. In the meantime, the nightmares were fantastic and entertaining, not at all like the smothering, dread-loaded replays of the Day which woke him groaning and drenched with sweat many mornings just after dawn.

But this time the starts did not presage deep sleep; instead, they left him wide awake, and considering images of himself more disquieting than any he could remember having seen in dreams. One of the shallow nightmares had been a fantasy of what might be going on in the Gottlieb's bedroom—evidently Sigrid had marked Tucci's celibate psyche more profoundly than he had realized—but from this he awoke suddenly to find himself staring at the invisible ceiling and straining to visualize, not the passages of love between the poet and his wife about which he had been dreaming, but what they might be saying about Dr. Frank Tucci and his errand.

That errand hadn't looked hard, to begin with. By all the rules of this kind of operation, Sigrid should now be bringing all possible feminine pressures to bear against Gottlieb's stand, and furthermore, she should be winning; after all, she would think first of her chil-

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dren, an argument of almost absolute potency ccompared with Gottlieb's abstract and selfish reasons for refusing to go to the Vaults. That was generally how it went.

But Gottlieb was not typical; he was, in fact, decidedly hard upon Tucci's image of himself. He was a quack, by his own admission, but he was not a charlatan—a distinction without a difference before the Day, but presently one of the highest importance, now that Tucci was forced to think about it. And in this cool darkness after the preliminary, complacent nightmares, Tucci was beginning to see himself with horror as a flipped coin—not a quack no . . . he was an authentic doctor with a pre-Day degree, nobody could take that away from him; but he *was* a charlatan, or at the very least a shill. When, after all, had Tucci last practised medicine? Not since the Day. Ever since, he had been scooting about the empty menacingly quiet countryside on recruiting errands—practising trickery, not medicine.

Outside, a cloud rolled off the moon, and somewhere nearby a chorus of spring peepers began to sing: *Here we are, here we are, here we are* . . . They had been tadpoles in the mud when the hot water had come down toward the rivers in the spring floods; they might be bearing heavy radiation loads, but that was not something they were equipped to think about; they were celebrating only the eternal *now* in which they had become inch-long frogs, each with a St. Andrews *cross upon its back.* . . . *Here we are, we made it.* . . .

Here we are. We made it. Some are quacks, and nevertheless practise medicine as best they can. Some are flacks, for all their qualifications, and do nothing but shill . . . and burden the practitioners with hard decisions the Tuccis have become adroit at ducking. The Tuccis can always say that they were specialists before the Day—Tucci himself had been an electrophysiologist, and most of the machines that he needed to continue down the road were still unavailable in the Vaults—but every doctor *begins* as a general practitioner; was there any excuse, now, for shilling instead of practicing?

The phantoms marched whitely across the ceiling. Their answer was *No,* and again: *No.*

In this world, in fact, Gottlieb was a doctor—and Dr. Frank Tucci was not. That was the last nightmare of all.

He was ruminatively strapping his gear onto the baggage rack of the scooter, very early the next morning, when he heard the screen door bang and looked up to see Gottlieb coming down the front walk toward him. There were, he saw for the first time, tall lilacs

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and lilies-of-the-valley blooming all around the sides of the house. It was hard to believe that the world had ended, even here in Gottlieb's hollow. He straightened painfully in the bullet-proof suit and hoisted his bubble goggles.

"Nice of you," he said. "But you really needn't have seen me off. Keeping doctor's hours, you need all the sleep you can store up."

"Oh sure," Gottlieb said abstractedly. He leaned on the sagging gate. "But I wanted to talk to you. I had some trouble sleeping—I was thinking—I woke up this morning on the floor, and that hasn't happened to me since just before my final exams. If you've got a minute—"

"Of course. Certainly. But I'd like to get on the road before too long, to skip some of the heat of the day. This helmet absolutely fries my brains when the sun is high."

"Sure. I only wanted to say—I've changed my mind."

"Well. *That* was worth waiting for." Tucci took the helmet off and dropped the goggles carefully into it. "I hope you won't mind if I'm in a hurry, or rather, if *we're* in a hurry. We'll have trucks down here for you in about a week at the latest; it takes a while to get a convoy organized. We'll also send a bus, since I think you'll find that about half your patients will want to follow you, once you've explained the proposition to them."

"That'll cost a lot of gasoline," Gottlieb said. He seemed embarrassed and disturbed. Tucci waited a moment, and then said, very gently:

"If you don't mind, Mr. Gottlieb, would you tell me why you reversed yourself? I'd about given up."

"It's my own fault," Gottlieb broke out, in a transport of anger. "I must have given that speech about the Hippocratic Oath two thousand times in the last year or so. I never took the Oath, that's a fact, and I don't believe in it. But . . . You said I'd be able to treat more patients, and treat them better, if I went to work for you. That's been on my mind all night. And I can't get away from it. It began to look to me as though a man can't be just half a doctor, whether that's all he wants or not. And I did go into this doctor business by my own choice."

He scuffed at the foot of the gate with one broganned toe, as though he might kick it if no one were watching him.

"So there I am. I have to go with you—and never mind that I'm giving up everything I've won so far—and a lot more that I hoped for. I may stop hating you five or ten years from now. But I could have spared myself, if I hadn't been so superior about Hippocrates all this time, and just minded my own business."

"The oath that you don't take,"

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Tucci agreed, resuming his goggles and helmet again, "is often more binding than the one you do."

He stamped on the kick starter. Miraculously, the battered old Lambretta spat and began to snarl on the first try. Gottlieb stepped back, with a gesture of farewell. At the last moment, however, something else seemed to occur to him.

"Dr. Tucci!" he shouted above the noise of the one-lung engine.

"Yes? Better make it loud, Mr. Gottlieb—I'm almost deaf aboard this thing."

"It's not 'the forelock of time', you know," Gottlieb said. He did not seem to be yelling, but Tucci could hear him quite plainly. "The word in the poem is 'forepaws.'"

Tucci nodded gravely, glad that the helmet and goggles could be counted on to mask his expression, and put the scooter in gear. As he tooled off up the hill, his methodical mind began to chew slowly, gently, inexorably upon the question of who had been manipulating whom.

He knew that it would be a good many years before he had an answer.

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Everybody, of course, has either read or heard about the smash bestseller and Pulitzer Prize winner, ADVISE AND CONSENT; *we venture to guess, however, that a considerable number of readers who know of the book do not readily remember the name of its author. It is a curious but established fact that titles and authors do not remain reliably associated in the mind of the public—a fact recognized by Ellery Queen some 30 years ago when that collaborative writing team decided to adopt as their pseudonym the name of the featured character in their books. Of course, the more successful books a writer produces, the better his name is remembered, and* ADVISE AND CONSENT *is only the first book in a planned tetralogy, the other three of which will be titled* A SHADE OF DIFFERENCE, CAPABLE OF HONOR, *and* PRESERVE AND PROTECT. *It is quite possible that by the time the last one is published, you will go to your bookstore to ask for the new Allen Drury, the title of which has somehow slipped your mind. . . . Forget that for now, however, and entertain yourself with Mr. Drury's newest work—a classically simple little tale of a drowsy afternoon in spring, and the terror that comes with a sudden awareness of the unknown. . . .*

SOMETHING

by Allen Drury

SMALL AND PROVINCIAL, THE college topped the gentle rise in the center of the plain; small and provincial, the museum stood just east of it amid the level fields. Through the open windows the afternoon sun, streaming across a thousand miles of Middle West, came to rest in a warm pool of light at the foot of the Egyptian Room door. Outside, the trees, planted around the building in a self-conscious row by some long-forgotten founder, stirred gently

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in the fresh yet drowsy air of early spring. The season, not yet productive of flies, permitted the heavily ornamented front doors to stand open on a view which passed across the main college buildings to the town, beyond it to fields already sown with grain, and so presently to an endless immensity of far distances lost at last in the cloudless depths of the sky.

Standing outside on the steps for a second before going back in, he felt completely at peace. Everything—his position as curator, the chance to study, the opportunity to live with just the right degree of responsibility in the academic atmosphere he loved—conspired to give him a steady satisfaction, sharpened by the afternoon's perfection into something approaching happiness. Even the neglect which was his only reward for the careful care he gave the museum's small but comprehensive collection had ceased to bother him. They cared little for him, the students whose cars he could see in the distance passing toward the town, and even the faculty rarely entered his domain; but today that seemed unimportant, far away, in another world from this warm and sleepy hour.

As he stood there, his mind lazily relaxed, a little breeze rose suddenly in the fields, sliding like a snake through the shoots of grain. It leaped and twisted toward him, turning and writhing as though moved by a life of its own. A pleasurable anticipation banished the thought that the sparse hairs, so carefully combed, would be disarranged. What if they were! It was spring, and wind was good in the spring, and what if hairs were disarranged! He hoped they would be.

He noticed that the breeze had grown stronger, darting from side to side through the grass. It was about a hundred yards away, now. From somewhere in the fields it had picked up a weatherbeaten scrap of paper, was tossing it furiously back and forth like a puppy with a bone. Just before the wind reached him, the paper fell to the ground; then the current of air, rushing swiftly up the steps, struck him full in the face. He gasped, not only at its force, which he had underestimated, but at its nature, which he had not foreseen. It was hot—unusually hot and dry; so arid and lifeless that it quite took his breath away for a second. It wasn't a spring wind at all; rather the wind of summer, and summer somewhere far away in a hot land. It caused his throat to constrict painfully; then it was gone.

He looked around stupidly, as though he expected to see something behind him; but there was nothing. Only the open doors, the main room of the museum with

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its neat row of cases, the grand stairway going up to the right, and the sun falling across the floor to the Egyptian Room. He shook his head, as if dazed, and laughed. What a silly thought! For a moment, when the breeze had dropped the paper so abruptly, he had had the curious impression that its sudden loss of interest had been caused by a more than normal whimsy. He had had the odd idea that it had dropped the paper *because it was bored.* And when it had finally reached the steps, it had seemed to pass, not around, but through him. He laughed again, ruefully; he was getting old! Old and doddering and—and crazy in the head, as they said.

He turned back to the peaceful panorama which stretched to the horizon. Spring! Spring, and he was not so old, either! As if to prove it, he ran lightly down the steps to where the paper lay on the grass. He couldn't leave rubbish lying around for the cats to play with. There were two or three, living in forgotten corners of the masonry, existing on mice and insects and scraps of food he sometimes remembered to bring them; one was a little gray kitten, of which he was quite fond. Realizing what a holiday they would have with it if they found it, he picked the paper up, folded it neatly, and trotted back up the steps.

At the top he turned for a last look at the gentle peace of the afternoon. Then he started in. In the doorway he paused. For some reason he could not explain, he wanted to close the doors after him. He attempted to ignore the feeling; he could not, the compulsion was too strong. After a moment, not knowing quite why, he pulled the doors part-way together; a shame-faced gesture, and one coming, though he did not know it, too late.

He noticed the confusion on his desk as soon as he started towards it. The papers he had left neatly piled on each side of the blotter had been pushed askew; one was half-way across the floor to the Egyptian Room. If the breeze had done that, it must have taken almost a right-angle turn once it got inside the door, for the desk stood along the wall to the right, opposite the foot of the stairs. Or had it been one of the cats, slipping in when his back was turned? He remembered running down the steps, leaving the door unguarded. After a moment he decided that must be it; and a tolerant amusement caused him to smile. Charming animals, but pesky, sometimes; and apt to be mischievous. It was not until he reached the desk that his complacency vanished.

Was it only a quirk of the mind, or did he actually see a pattern in the confusion there?

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He could almost swear to it; a sort of deliberate disarray, as though someone had picked the papers up, held them high above the desk, and then let them fall. And on the desk itself, the papers still remaining had a curiously abandoned look, as though someone had been engaged in disturbing them and then had stopped suddenly. And again that odd impression of boredom shot through his mind, bringing with it this time a faint uneasiness, such as one might feel in the presence of something just a little abnormal, and strange.

Still, he thought, as he picked up the papers and rearranged them in their former order, it could have been the cats; in fact, it must have been the cats. The little gray kitten in particular was fond of climbing on the desk; never, to be sure, to wreak quite such havoc as it had this time, but always to disturb whatever it came across. He realized that it must be somewhere in the building now, and, thinking of the serious damage it could do to the fragile exhibits on the second floor, he started hastily up the marble staircase. On the landing he paused abruptly. Before he could stop himself, he had whirled around like a toy on a revolving platform and called out into the empty room below.

"What's that?" he said. The words flung themselves back to him sibilantly from the echoing walls. Nothing stirred in the sunlight on the floor, no sounds other than those of the day outside came to him. After a moment he laughed shortly. How stupid! He knew he was alone in the building; he must have imagined that sudden sensation of another presence. He told himself firmly not to be a fool. If he started seeing things in broad daylight, what would it be like when—he gasped, and a little chill of fear ran suddenly down his back.

"Well, for heaven's sakes," he said to the listening statues, the attentive cases, "look at that desk!"

He was not quite sure how he got back down the stairs and across the floor to it, for when he did his relief blotted out the details of one of the hardest things he had ever done. "I feel like dancing a jig," he thought; and the idea amused him so much that he began to laugh. What would people say if they came in and caught him capering! And for such an insignificant reason, too. Simply because a kitten had got its paw wet with ink and drawn a long smear on his blotter—simply because a kitten *was* a kitten, beyond all doubt—he wanted to dance a jig! He continued to chuckle at himself while he picked up the papers for the second time and put them away in the desk. If he wasn't the one,

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letting a breeze and a kitten give him the fidgets! What wouldn't it be next!

He had just finished putting the last paper away in the drawer when the noise began. At first it was very faint and very far away, and he hardly noticed it. Then it grew stronger and he began to hear it. Intrigued by its quality, he tried idly to find an explanation. It wasn't a steady sound, but quick, nervous, separated. It might be someone having trouble with his car; but not quite. It might be water spattering onto pavement from a hose; but not quite. For a long time it seemed to originate in the fields. Not until he decided that it sounded exactly like heavy cloth being torn did he realize that it was coming from somewhere inside the building.

His first impulse was one of disbelief, followed by annoyance. It wasn't enough to see things; one had to hear them too. He told himself again not to be a fool. There was probably some very simple explanation. But when none occurred to him, he began to grow afraid. It was such a pointless noise; there was so little excuse for it. It seemed to exist outside time and space, as remote from humdrum reason as the paper in the breeze or the disarrangement on his desk. In fact, if one were romantic enough, one might almost see a connection between them, a certain perverse pattern linking them together. Not that he did, of course; but it was all he could do to make himself leave the desk and begin searching the building. Only a sense of duty and the realization that he would be foolish to give in to his feeling made him do so.

When he had gone through all the rooms, upstairs and down, and found each as he knew it would be, placid and empty and still, he returned breathlessly to the head of the stairs. The noise was beginning to grow a little louder, its harsh rasp more frequent. He shook his head helplessly. It couldn't be explained; and it couldn't be found; and he didn't really know what to do about it. He might ignore it; but it was scarcely the sort of thing one could ignore. It was too strange, too—frightening.

His hands felt cold; the combination of the beautiful day and that pointless sound produced by its very incongruity a mood closely approaching terror. He knew that running back to the head of the stairs so fast that he had almost missed the landing and fallen hadn't helped matters any; but he had not been able to prevent that instinctive flight, even when his mind told him it was a flight from nothing. The sunlight had seemed suddenly garish, the peace of the afternoon a mock-

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ery; he had had again that sharp impression of—something. It had given wings to his feet; before he knew it, he had hastened back to the echoing expanse of the main room.

Resting for a moment while he caught his breath, he began to notice a new rhythm in the noise. It was slower; no quieter, but much slower. Presently it stopped for several seconds and then began again. A thrill of recognition caused him to catch his breath. It's getting bored again, he thought; *what will it do now?* He cleared his throat abruptly and counted firmly to ten. When he had finished he forced himself to laugh.

"How absurd!" he said aloud. "I'm talking just as though there really were something."

The familiar sound of his own voice restored his composure and his common sense. What a doddering old ninny he was! Making a ghost out of whole cloth and then letting it scare him to death! He must have one foot in the grave, indeed; the one he thought with, evidently.

He marched firmly down the stairs and across to his desk, putting the noise aside brusquely. Let it tear up the whole roll of burlap if he wanted to, whatever it was. He had other things to do. He couldn't be bothered with noises, no matter how unique.

Noticing the ink-smeared blotter when he reached the desk, he remembered that the kitten was still somewhere in the building.

"Kitty!" he called. "Here, kitty, kitty, kitty!" Then he gave an amused sigh of relief. "Why, of course," he said. "It's sharpening its claws somewhere."

After that it was easy to search the building again. It was one thing to look for a Noise, a disembodied Something; it was another to look for a kitten. Outside the door of the Egyptian Room he hesitated momentarily in the sun. In his mind's eye he could almost see the little animal, busily engaged in—or could he? Supposing—supposing that when he opened the door he saw— A sudden furious scratching decided him. The little devil must be sharpening its claws on one of the mummy-cases that stood along the walls. He strode forward impatiently, into the absolute silence of the empty room.

"Kitty?" he said tentatively. His only answer was a sudden bickering of the birds in the trees outside. He called again.

"Here, kitty?" The silence seemed to become, if anything, more profound.

"Come out here, you little scamp!" he said; in spite of himself he was unable to keep a pleading note out of his voice. "Come out from under there!

"Kitty!" he said firmly; and regretted it at once, for the noise

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answered him. As surely as though it had spoken, it answered; a surprised, somewhat uncertain, somewhat puzzled answer.

"What?" its rasp seemed to be saying.

"Kitty!" he cried, his voice growing thin.

"What? What?" said the noise again.

At this sound, which seemed to represent the impersonal curiosity of something so inhuman, or so long dead, that it had lost all contact with the world of men, his control snapped completely.

"What are you?" he cried. "What do you want, you frightful thing?"

At once the room filled with sound, harsh, rasping, furious, echoing back and forth between the walls until it seemed to come from everywhere. He felt as though a weight were pressing on his head; a storm of sound seemed to be crushing the breath from his body.

With an inarticulate cry he turned and ran from the room. Pursued by phantoms which seemed to dance along the sunlight, caught in the grip of fear, he ran frantically across the floor and without reason up the stairs. No, his mind said senselessly; no. *Go back.* Unable to control his terror, he turned like a desperate animal. In his haste, blinded by the sunlight which now fell full across the landing, his foot missed the step and he hurtled forward, to land halfway down the stairs. Just before his skull struck the stone a streak of gray shot across his vision. In a last flash of sanity he had time to think *Of course, of course,* before his mind reeled down forever into darkness.

The kitten trotted out into the center of the room, stretched and yawned. It paid no attention to the ponderous descent of his body as it slid slowly, jerkily, step by step to the floor.

Purring contentedly, the kitten cleaned itself. Finished, it stretched once more and yawned again. Suddenly it stopped and listened intently. Its eyes widened, and along its back the hairs began to rise.

From somewhere in the echoing room a little noise began. It wasn't a steady sound, but quick, nervous, separated. It sounded exactly like heavy cloth being torn, and it grew rapidly louder and nearer as the kitten crouched rigid with terror in the sun.

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The English expert, now living in Ceylon, takes us into the nucleus of a spectacular comet, and poses a knotty survival problem . . . in a story we were briefly, and unworthily, tempted to retitle "Manhood's End."

INSIDE THE COMET

by Arthur C. Clarke

"I DON'T KNOW WHY I'M RECORDING this," said George Takeo Pickett slowly into the hovering microphone. "There's no chance that anyone will ever hear it. They say the comet will bring us back to the neighbourhood of Earth in about two million years, when it makes its next turn around the Sun. I wonder if mankind will still be in existence then, and whether the comet will put on as good a display for our descendants as it did for us? Maybe they'll launch an expedition, just as we have done, to see what they can find. And they'll find us. . . .

"For the ship will still be in perfect condition, even after all those ages. There'll be fuel in the tanks, maybe even plenty of air, for our food will give out first, and we'll starve before we suffocate. But I guess we won't wait for that; it will be quicker to open the airlock and get it all over.

"When I was a kid, I read a book on polar exploration called WINTER AMID THE ICE. Well, that's what we're facing now. There's ice all around us, floating in great porous bergs. *Challenger's* in the middle of a cluster of them, orbiting round one another so slowly that you have to wait several minutes before you're certain they've moved. But no expedition to Earth's poles ever faced *our* winter. During most of that two million years, the temperature will be four hundred and fifty below zero. We'll be so far away from the sun that it'll give about as much heat as the stars. And who ever tried to warm his hands by Sirius on a cold winter night?"

That absurd image, coming suddenly into his mind, broke him up completely. He could not speak for memories of moonlight upon snowfields, of Christmas chimes ringing across a land already fifty million miles away.

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Suddenly he was weeping like a child, his self-control dissolved by the remembrance of all the familiar, disregarded beauties of the Earth he had forever lost.

And everything had begun so well, in such a blaze of excitement and adventure. He could recall (was it only six months ago?) the very first time he had gone out to look for the comet, soon after eighteen-year-old Jimmy Randall had found it in his home-made telescope and sent his famous telegram to Mount Stromlo Observatory. In those early days, it had been only a faint pollywog of mist, moving slowly through the constellation of Eridanus, just south of the Equator. It was still far beyond Mars, sweeping sunwards along its immensely elongated orbit. When it had last shone in the skies of Earth, there were no men to see it, and there might be none when it appeared again. The human race was seeing Randall's Comet for the first and perhaps the only time.

As it approached the sun, it grew, blasting out plumes and jets, the smallest of which was larger than a hundred Earths. Like a great pennant streaming down some cosmic breeze, the comet's tail was already forty million miles long when it raced past the orbit of Mars. It was then that the astronomers realised that this might be the most spectacular sight ever to appear in the heavens; the display put on by Halley's Comet, back in 1986, would be nothing in comparison. And it was then that the administrators of the International Astrophysical Decade decided to send the research ship *Challenger* chasing after it, if she could be fitted out in time; for here was a chance that might not come again in a thousand years.

For weeks on end, in the hours before dawn, the comet sprawled across the sky like a second, but far brighter, Milky Way. As it approached the Sun, and felt again the fires it had not known since the mammoths shook the Earth, it became steadily more active. Gouts of luminous gas erupted from its core, forming great fans which turned like slowly swinging searchlights across the stars. The tail, now a hundred million miles long, divided into intricate bands and streamers which changed their patterns completely in the course of a single night. Always they pointed away from the Sun, as if driven starwards by a great wind blowing forever outwards from the heart of the Solar System.

When the *Challenger* assignment had been given to him, George Pickett could hardly believe his luck. Nothing like this had happened to any reporter since William Laurence and the

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Atom Bomb. The facts that he had a science degree, was unmarried, in good health, weighed less than one hundred and twenty pounds, and had no appendix, undoubtedly helped. But there must have been many others equally qualified; well, their envy would soon turn to relief.

As the skimpy payload of *Challenger* could not accommodate a mere reporter, Pickett had had to double up in his spare time as Executive Officer. This meant, in practice, that he had to write up the Log, act as Captain's secretary, keep track of stores, and balance the accounts. It was very fortunate, he often thought, that in the weightless world of space one needed only three hours sleep in every twenty-four.

Keeping his two duties separate had required a great deal of tact. When he was not writing in his closet-sized office, or checking the thousands of items stacked away in Stores, he would go on the prowl with his recorder. He had been careful, at one time or another, to interview every one of the twenty scientists and engineers who manned *Challenger*. Not all the recordings had been radioed back to Earth; some had been too technical, some too inarticulate, and others too much the reverse. But at least he had played no favourites and, as far as he knew, had trodden on no toes. Not that it mattered now.

He wondered how Dr. Martens was taking it; the astronomer had been one of his most difficult subjects, yet the one who could give most information. On a sudden impulse, Pickett located the earliest of the Martens tapes, and inserted it in the recorder. He knew that he was trying to escape from the present by retreating into the past, but the only effect of that self-knowledge was to make him hope the experiment would succeed.

He still had vivid memories of that first interview, for the weightless microphone, wavering only slightly in the draught of air from the ventilators, had almost hypnotised him into incoherence. Yet no one would have guessed: his voice had its normal, professional smoothness.

They had been twenty million miles behind the comet, but swiftly overtaking it, when he had trapped Martens in the observatory and thrown that opening question at him.

"Dr. Martens," he began, "just what *is* Randall's Comet made of?"

"Quite a mixture," the astronomer had answered. "and it's changing all the time as we move away from the sun. But the tail's mostly ammonia, methane, carbon dioxide, water vapour, cyanogen—"

"Cyanogen? Isn't that a poison gas? What would happen if the Earth ran into it?"

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"Not a thing. Though it looks so spectacular, by our normal standards a comet's tail is a pretty good vacuum. A volume as big as Earth contains about as much gas as a matchbox full of air."

"And yet this thin stuff puts on such a wonderful display!"

"So does the equally thin gas in an electric sign, and for the same reason. A comet's tail glows because the Sun bombards it with electrically charged particles. It's a cosmic sky-sign; one day, I'm afraid, the advertising people will wake up to this, and find a way of writing slogans across the Solar System."

"That's a depressing thought—though I suppose someone will claim it's a triumph of applied science. But let's leave the tail; how soon will we get into the heart of the comet—the nucleus, I believe you call it?"

"Since a stern chase always takes a long time, it will be another two weeks before we enter the nucleus. We'll be ploughing deeper and deeper into the tail, taking a cross-section through the comet as we catch up with it. But though the nucleus is still twenty million miles ahead, we've already learned a good deal about it. For one thing, it's extremely small—less than fifty miles across. And even that's not solid, but probably consists of thousands of smaller bodies, all milling round in a cloud."

"Will we be able to go into the nucleus?"

"We'll know when we get there. Maybe we'll play safe and study it through our telescopes from a few thousand miles away. But personally, I'll be disappointed unless we go right inside. Won't you?"

Pickett switched off the recorder. Yes, Martens had been right. He *would* have been disappointed, especially as there had seemed no possible source of danger. Nor was there, as far as the comet was concerned. The danger had come from within.

They had sailed through one after another of the huge but unimaginably tenuous curtains of gas that Randall's Comet was still ejecting as it raced away from the Sun. Yet even now, though they were approaching the densest regions of the nucleus, they were for all practical purposes in a perfect vacuum. The luminous fog that stretched round *Challenger* for so many millions of miles scarcely dimmed the stars; but directly ahead, where lay the comet's core, there was a brilliant patch of hazy light, luring them onwards like a will-of-the-wisp.

The electrical disturbances now taking place around them with ever-increasing violence had almost completely cut their link with Earth. The ship's main radio transmitter could just get a

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signal through, but for the last few days they had been reduced to sending "O.K." messages in Morse. When they broke away from the comet and headed for home, normal communication would be resumed; but now they were almost as isolated as explorers had been in the days before radio. It was inconvenient, but that was all. Indeed, Pickett rather welcomed this state of affairs; it gave him more time to get on with his clerical duties. Though *Challenger* was sailing into the heart of a comet, on a course that no captain could have dreamed of before the Twentieth Century, someone still had to check the provisions and count the stores.

Very slowly and cautiously, her radar probing the whole sphere of space around her, *Challenger* crept into the nucleus of the comet. And there she came to rest—amid the ice.

Back in the 1940's, Whipple of Harvard had guessed the truth, but it was hard to believe it even when the evidence was before one's eyes. The comet's relatively tiny core was a loose cluster of ice-bergs, drifting and turning round one another as they moved along their orbit. But unlike the bergs that floated in polar seas, they were not a dazzling white, nor were they made of water. They were a dirty grey, and very porous, like partly-thawed snow. And they were riddled with pockets of methane and frozen ammonia, which erupted from time to time in gigantic gas jets as they absorbed the heat of the sun. It was a wonderful display, but Pickett had little time to admire it, at first. Now he had far too much.

He had been doing his routine check of the ship's stores when he came face to face with disaster—though it was some time before he realised it. For the supply situation had been perfectly satisfactory; they had ample stocks for the return to earth. He had checked that with his own eyes, and now had merely to confirm the balances recorded in the pin-head-sized section of the ship's electronic memory which stored all the accounts.

When the first crazy figures flashed on the screen, Pickett assumed that he had pressed the wrong key. He cleared the totals, and fed the information into the computer once more.

60 cases of pressed meat to start with; 17 consumed so far; quantity left: 99999943.

He tried again, and again, with no better result. Then, feeling annoyed but not particularly alarmed, he went in search of Dr. Martens.

He found the astronomer in the Torture Chamber—the tiny gym, squeezed between the Technical Stores and the bulk-

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head of the main propellant tank. Each member of the crew had to exercise here for an hour a day, lest his muscles waste away in his gravityless environment. Martens was wrestling with a set of powerful springs, an expression of grim determination on his face. It became much grimmer when Pickett gave his report.

A few tests on the main input board quickly told them the worst. "The computer's insane," said Martens. "It can't even add or subtract."

"But surely we can fix it!"

Martens shook his head. He had lost all his usual cocky self-confidence; he looked, Pickett told himself, like an inflated rubber doll that had started to leak.

"Not even the builders could do that. It's a solid mass of microcircuits, packed as tightly as the human brain. The memory units are still operating, but the computing section's utterly useless. It just scrambles the figures you feed into it."

"And where does that leave us?" Pickett asked.

"It means that we're all dead," Martens answered flatly. "Without the computer, we're done for. It's impossible to calculate an orbit back to Earth. It would take an army of mathematicians weeks to work it out on paper."

"That's ridiculous! The ship's in perfect condition, we've plenty of food and fuel—and you tell me we're all going to die just because we can't do a few sums."

"A *few* sums!" retorted Martens, with a trace of his old spirit. "A major navigational change, like the one needed to break away from the comet and put us on an orbit to Earth, involves about a hundred thousand separate calculations. Even the computer needs several minutes for the job."

Pickett was no mathematician, but he knew enough of astronautics to understand the situation. A ship coasting through space was under the influence of many bodies. The main force controlling it was the gravity of the Sun, which kept all the planets firmly chained in their orbits. But the planets themselves also tugged it this way and that, though with much feebler strength. To allow for all these conflicting tugs and pulls—above all, to take advantage of them to reach at the right moment a desired goal scores of millions of miles away—was a problem of fantastic complexity. He could appreciate Martens' despair; no man could work without the tools of his trade, and no trade needed more elaborate tools than this one.

Even after the Captain's announcement, and that first emergency conference when the entire crew had gathered to discuss the situation, it had taken hours for

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the facts to sink home. The end was still so many months away that the mind could not grasp it; they were under sentence of death, but there was no hurry about the execution. And the view was still superb. . . .

Beyond the glowing mists that enveloped them—and which would be their celestial monument to the end of time—they could see the great beacon of Jupiter, brighter than all the stars. Some of them might still be alive, if the others were willing to sacrifice themselves, when the ship went past the mightiest of the Sun's children. Would the extra weeks of life be worth it, Pickett asked himself, to see with your own eyes the sight that Galileo had first glimpsed through his crude telescope four centuries ago —the satellites of Jupiter, shuttling back and forth like beads upon an invisible wire?

Beads upon a wire. With that thought, an all-but-forgotten childhood memory exploded out of his subconscious. It must have been there for days, struggling upwards into the light. Now at last it had forced itself upon his waiting mind.

"No!" he cried aloud. "It's ridiculous! They'll laugh at me!"

So what? said the other half of his mind. You've nothing to lose; if it does no more, it will keep everyone busy while the food and the oxygen dwindle away. Even the faintest hope is better than none at all. . . .

He stopped fidgeting with the recorder; the mood of maudlin self-pity was over. Releasing the elastic webbing that held him to his seat, he set off for the Technical Stores in search of the material he needed.

"This," said Dr. Martens three days later, "isn't my idea of a joke." He gave a contemptuous glance at the flimsy structure of wire and wood that Pickett was holding in his hand.

"I guessed you'd say that," Pickett replied, keeping his temper under control. "But please listen to me for a minute. My grandmother was Japanese, and when I was a kid she told me a story that I'd completely forgotten until this week. I think it may save our lives.

"Sometime after the Second World War, there was a contest between an American with an electric desk calculator, and a Japanese using an abacus like this. The abacus won."

"Then it must have been a poor desk machine, or an incompetent operator."

"They used the best in the U.S. Army. But let's stop arguing. Give me a test—say a couple of three-figure numbers to multiply."

"Oh—856 times 437."

Pickett's fingers danced over the beads, sliding them up and

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down the wires with lightning speed. There were twelve wires in all, so that the abacus could handle numbers up to 999999999999—or could be divided into separate sections where several independent calculations could be carried out simultaneously.

"374072," said Pickett, after an incredibly brief interval of time. "Now see how long *you* take to do it, with pencil and paper."

There was a much longer delay before Martens, who like most mathematicians was poor at arithmetic, called out "375072." A hasty check soon confirmed that Martens had taken at least three times as long as Pickett to arrive at the wrong answer.

The astronomer's face was a study in mingled chagrin, astonishment and curiosity.

"Where did you learn that trick?" he asked. "I thought those things could only add and subtract."

"Well — multiplication's only repeated addition, isn't it? All I did was to add 856 seven times in the unit column, three times in the tens column, and four times in the hundreds column. You do the same thing when you use pencil and paper. Of course, there are some short cuts, but if you think *I'm* fast you should have seen my granduncle. He used to work in a Yokohama bank, and you couldn't see his fingers when he was going at speed. He taught me some of the tricks, but I've forgotten most of them in the last twenty years. I've only been practising for a couple of days, so I'm still pretty slow. All the same, I hope I've convinced you that there's something in my argument."

"You certainly have: I'm quite impressed. Can you divide just as quickly?"

"Very nearly, when you've had enough experience."

Martens picked up the abacus, and started flicking the beads back and forth. Then he sighed.

"Ingenious—but it doesn't really help us. Even if it's ten times as fast as a man with pencil and paper—which it isn't—the computer was a million times faster."

"I've thought of that," answered Pickett, a little impatiently.

(Martens had no guts—he gave up too easily. How did he think astronomers managed a hundred years ago, before there were any computers?)

"This is what I propose—tell me if you can see any flaws in it. . . ."

Carefully and earnestly he detailed his plan. As he did so, Martens slowly relaxed, and presently he gave the first laugh that Pickett had heard aboard *Challenger* for days.

"I want to see the skipper's face," said the astronomer, "when you tell him that we're all going

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back to the nursery to start playing with beads."

There was scepticism at first, but it vanished swiftly when Pickett gave a few demonstrations. To men who had grown up in a world of electronics, the fact that a simple structure of wire and beads could perform such apparent miracles was a revelation. It was also a challenge, and because their lives depended upon it they responded eagerly.

As soon as the engineering staff had built enough smoothly-operating copies of Pickett's crude prototype, the classes began. It took only a few minutes to explain the basic principles; what required time was practice—hour after hour of it, until the fingers flew automatically across the wires and flicked the beads into the right positions without any need for conscious thought. There were some members of the crew who never acquired both accuracy and speed, even after a week of constant practice: but there were others who quickly outdistanced Pickett himself.

They dreamed counters and columns, and flicked beads in their sleep. As soon as they had passed beyond the elementary stage they were divided into teams which then competed fiercely against each other, until they had reached still higher standards of proficiency. In the end, there were men aboard *Challenger* who could multiply four-figure numbers on the abacus in fifteen seconds, and keep it up hour after hour.

Such work was purely mechanical; it required skill, but no intelligence. The really difficult job was Martens', and there was little that anyone could do to help him. He had to forget all the machine-based techniques he had taken for granted, and rearrange his calculations so that they could be carried out automatically by men who had no idea of the meaning of the figures they were manipulating. He would feed them the basic data, and then they would follow the programme he had laid down. After a few hours of patient routine work, the answer would emerge from the end of the mathematical production line—provided that no mistakes had been made. And the way to guard against that was to have two independent teams working, cross-checking results regularly.

"What we've done," said Pickett into his recorder, when at last he had time to think of the audience he had never expected to speak to again, "is to build a computer out of human beings instead of electronic circuits. It's a few thousand times slower, can't handle many digits, and gets tired easily—but it's doing the job. Not the whole job of navigating to Earth

(concluded on page 46)

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"Time Travel," as such, properly falls into the field of fantasy, as far as we know today; getting into the future without aging minute for minute is, on the other hand, a definite possibility. It can be done by traveling at a speed close to that of light, or by being frozen alive . . . or possibly by some method such as that mentioned in the following account of a man who found out what life might be like some 500 years in the future, on our tired, over-crowded planet.

WELCOME

by Poul Anderson

BARLOW'S FIRST ASTONISHMENT was at how little different the future seemed. He had thought that five hundred years would change every detail beyond imagination. To be sure, nothing was quite like the twentieth century United States; but contemporary Mexico had been a good deal more exotic than the North American Federation of the United World Republics looked.

Several persons awaited him when he emerged from the super-energy state. All but one were men, ranging from boyish to middle-aged: two Orientals, a Negro, the others white. They wore shirts, trousers, and fabric shoes, of synthetic material in subdued colors, cut much like Barlow's. One had a sleek pistol-like weapon in a holster, but left it there, unafraid of the newcomer. They all gathered around, made sympathetic noises in accented but recognizable English, led him to a couch and gave him a drink. The room was windowless, with a fluorescent ceiling and ventilator grilles. A workbench supported miscellaneous scientific equipment, most of which Barlow could identify.

"Heh, now, buddo, swallow this an' you'll feel better."

Barlow obeyed mechanically. He had a bad case of the shakes. A gentle, relaxing warmth spread through him. Within minutes he could regard his situation as calmly as if it were someone else's. He felt happy, his mind clearer and quicker than usual. And yet, he thought, this was not so different from the tranquilizers of his era.

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"I guess he's 'kay now, Joe," said a young man.

The oldest, who appeared to be the leader, nodded. "How're you?" he smiled, offering his hand. "I'm Joe Grozen. Here's my primary daughter Amily. She 'nsisted on seeing you arrive. I won' ask you to 'member any other names right off."

"Tom Barlow." He was much taken with Amily, who was tall and well-formed, with dark hair falling past a heartshaped blue-eyed face and halfway down her back. She wore sandals, shorts, a kind of tee shirt, and a friendly expression. "What, uh, what year is this?"

"Twen'y-four nine'y-seven," she replied. "The twelfth April. Your calculations were very close. This place was readied special for your coming."

He had to ask it, with his heart in his throat despite all soothing drugs: "Is there any way for me to return?"

Joe Grozen's broad red visage grew sober. "No," he muttered. "'Fraid not."

Barlow sighed. "Never mind. I didn't expect it. Travel into the past, an obvious absurdity. All I did was give myself a jolt of energy, a vector along the time axis rather than through space, and so increased my rate of existence several millionfold. . . . But you know all about that." He fumbled after a cigaret.

"Oh, yes," said an Oriental. "The phenomenon's well un'erstood today." He bowed. "Though 's an honor to meet its first discoverer. So youthful you are, too."

"Sam's chief o' the technics department," explained Amily. "Natur'lly he'd be mos' in'erested in the science aspect. An' Phil here." She laid a hand briefly on the shoulder of the Negro. "He heads up the sociohist'ry section. He'll want to ask you all sorts o' questions 'bout the past."

"You'll have status all your life in my department, if you wish," Phil assured Barlow. "Special lecturer, consultant, whatever you want to call it. We're missing so much information about everything prior to the Atomic Wars."

"Shut up, you damn scientists," said Joe good-naturedly. "Our frien' Tom is first of all a free human being. You can quiz him later, but give the poor tovarsh time to get used to us first. How y' feeling now, Tom?"

"Okay." Barlow drew heavily on his cigaret. It might have been the drug, or simply the conviction, now proven, that his farewells in the twentieth century had been final. But whatever the cause, that era already seemed remote—though he had departed it less than half an hour ago, as far as his conscious mind knew. His fears had not materialized: emergence in a desert, or an Orwellian dictatorship, or something equally

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horrible. He'd gambled on finding a world where his own romantic advent would give him a head start in establishing himself. (Surely, even in the course of five hundred years, there had not been many time leapers. The messages he left, sealed into marked blocks of concrete, had been carefully designed to arouse the curiosity of future humankind about Thomas Barlow.) These easy-going, familiar-looking people dissolved the tension in him. His gamble had paid off.

"Sure, I'm fine," he said. "Tired, is all."

Joe nodded. "That I un'erstan'. We got a home all prepared for you. You can rest up there. I'd like to give you a welcoming banquet this evening, though. Lots o' people want to meet you."

"I don't need—" Barlow was interrupted as Amily took him by the hand.

"You come with me," she said. "I'll take you to your place. On the way I can give you a lining o' what the world's like these days."

"Now, wait," objected Phil.

"Wait, yourself," she chuckled. "I know you, you ol' professor. You'd stuff him so full o' precise information he wouldn' know his charge from a Dirac hole. What he needs right now is facts, not data."

"An' someone to snuggle with," Sam teased.

She made a face at him. Joe grinned. "What's the use o' being the Pres'dent's daughter, Tom, if she can' get to know you ahead of all the other girls?" he said. "You're going to be the most chased bachelor on this planet, in case you hadn' guessed."

As a matter of fact, Barlow had guessed, but it was pleasant to have his anticipations borne out.

There was a little more conversation, then he left the room with the young woman. They went through a very ordinary door and down a very ordinary hall to an underground garage. Gray-clad men, shaven-headed, bowed to Amily with extreme deference and wheeled forth a small, brightly colored, teardrop-shaped machine. The seats, within a transparent canopy, were luxurious. She punched controls and leaned back. Under some kind of automatic piloting, the vehicle whirred up a ramp and into the air.

From above, Barlow saw endless miles of buildings. The effect was more like Chicago than any futuristic megalopolis: drab, dirty cubicles, with nearly solid streams of pedestrians moving through the canyons between. Enormous vehicles, freight and passenger, rumbled on elevated ways which sometimes ducked below ground. Only a few private cars were to be seen, flitting like the one which bore him over the city.

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"What's the population?" he asked slowly.

Amily shrugged. "Who knows? For the whole world, maybe fifteen billion."

He whistled. A fifth of that number had been obscene enough when he departed his own century. However, progress must have been made in food production: algae, ocean farming, and whatnot. He was pleased to note that the air was free of smog. Probably exhaustion of chemical fuels had forced total conversion to atomic-electrical power.

Still, fifteen billion! He asked about other planets, and was a trifle saddened, but not surprised. to hear that they were visited about as often and as significantly as Pago Pago or Antarctica had been in his day.

"What sort of government do you have?" he inquired.

Amily's laugh was as musical a sound as he had ever heard. "True scientist, you! First you find out 'bout Mars, then 'bout affairs at home! Well, if I 'member my hist'ry right, you had many sep'rate countries in the twen'ieth century. That was before the Atomic Wars, no? All one country now, the United World Republics. How else could fifteen billion people survive?"

"And I suppose all the races are equal?"

"What? I don' un'erstan'."

With some effort, he got across to her the idea that secondary physical characteristics had once been considered important. She was as startled and amused to hear of race riots as he had once been to learn of blood spilled by early Christians over the *iota* distinguishing homoousian from homoiousian.

"That's cheering," he said. "As I'd hoped."

She regarded him closely, for minutes, while the aircar whispered through an April sky the color of her eyes. "Your message was never clear as to why you left," she said.

He looked away, down to the brick and concrete earth, up again to clouds. "It's hard to explain. Disgust would be the simplest word. I had no close personal ties after my mother died. And I saw freedom being crushed in most of the world, rotted and vulgarized in my own country; I read interviews with allegedly sane leaders, who spoke calmly of incinerating some tens of millions of women and children, if national policy so demanded. What had I to lose?"

She grimaced. "You did wisely, Tom. I won'er why so few others did the same. But then, there were the Atomic Wars, an' all their aftermath. Not much chance for escape. Nowadays, not much incentive. Who, with access to a time accelerator, 'd want to leave this world?"

He watched her, healthy, se-

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rene, and beautiful, and thought: Who, indeed? Of course he hadn't found any Utopia, but he hadn't been so naive as to expect that. It was enough to have found hope. He took out another cigaret, offered her one, and was politely refused. "Very few people use tobacco," she said. "Maybe jus' 'cause how expensive 'tis. But if you want, 's your own affair."

"The supremely civilized art," he said. "Minding one's own business."

She gave him a long, sidewise look. "Could be my business too," she murmured. "You're a han'some buddo, Tom."

The drug didn't slow down his pulse much.

He steered the conversation toward herself. She told him she was interested in sports and theatricals. Another bit of semantic confusion straightened itself out after he realized that "amateur performances" would have been a redundant phrase. All art nowadays was amateur, in the sense of being done for love (and, admittedly, social prestige) by people who had no need to do it for money. The mass-produced entertainment of Barlow's birthcentury was long forgotten. He was not displeased to learn that scientific research, as opposed to technology and engineering, was classed among the arts. Amily voiced a few opinions on Shakespeare's real intent in *Hamlet* and *Lear*, which might be banal to her contemporaries but to Barlow were so novel and perceptive that he felt this would prove one of the great artistic eras.

"But I did expect more change," he said. "More inventions, especially. What I've seen looks less than fifty years in advance of my period. No offense," he hastened to add.

Her expression was puzzled rather than hurt. "Why should there be change? Isn' this aircar good enough?"

Perhaps these folk were only rationalizing a static technology forced on them by swollen population and dwindled resources. Obviously capitalism such as Barlow's America had known, with its inherent need to innovate, was extinct. But he didn't mind. So much so-called progress had been sheer hokum anyhow. Let the world take a thousand years to digest the authentic advances of the Industrial Revolution; give the simple graces of living a chance to catch up.

The car glided down to a platform on the fiftieth floor of a skyscraper. The surrounding buildings were as hideous as most of the continent-wide city; but this tower stood clean and proud, its starkness relieved by colorful beds of mutated flowers on each terrace. "So many men wanted to sponsor you, we set up a fund an' got a special place," said Amily.

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She squeezed his arm. "But I saw you first, 'member."

With that buildup, he was surprised at the modesty of the apartment: two smallish rooms, plus bath and kitchenette. Amily showed him how to operate the gadgets, which were little different from those he knew. He was more interested in the quiet good taste of the interior decoration. The bookshelves were filled with finer volumes than he was accustomed to, most of them handbound. He wouldn't have much trouble getting used to the spelling, he saw. A music library ranged from medieval chants to modern symphonies almost as foreign to his ear; but in between he found many old friends, and when he tried out part of the Beethoven Ninth, he had never heard it better performed.

"I think you're hungry," said the girl. She opened a built-in refrigerator. "Lemme make you a san'wich." The meat was exotic, the bread far tastier than that library paste sold under the name in Barlow's milieu. He ate with pleasure, downing a bottle of excellent beer.

"Might be best you nap now," she said. "Been a strain, I know."

"I feel fine," he said, rising.

"Tha's jus' the tranquistim," she warned. "Tonight'll be a big do. Last till all hours."

He edged closer. She stayed where she was. Her eyelashes fluttered, long and smoky against smooth sunbrowned cheeks. "I can rest tomorrow," he said.

"Sure. You're your own master here, Tom. Later Dad'll find some status position for you, but tha's nominal. An' no hurry 'bout it."

He stopped, struck by a thought. In all this bewilderment of newness, it hadn't occurred to him before. But if he really was such a wonder, he had been received with extraordinary quietness and informality. "What does your father do?" he asked.

"Why, Joe's the Pres'dent o' the world. Didn' you realize?" She laughed afresh. "I s'pose not. We all get so used to each other, all good frien's not standin' on ceremony, we plain forgot—Oh, yes, Joe's the Pres'dent. Sam Wong heads the World Department o' Technics, Phil Faubus is chief sociohistorian, Ivan— No matter."

He needed a while to shed his preconceptions. That the chief executive of fifteen billion people could be so human seemed almost a contradiction in terms. He noticed he'd stepped back from Amily.

She noticed too, seized both his hands and pulled him closer. "Don' be scared," she said merrily. "Jus' 'cause I'm the Pres'dent's daughter, I won' eat you. Got other plans."

Barlow decided to take things as they came. "I told you before," he said. "Please don't rush off."

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"Well," she answered, low-voiced, "I'm not in that much of a hurry. . . ."

An hour or two later, when she declared that now he did need a rest and he was inclined to agree, he asked casually if she had any brothers or sisters.

"Sure. Lots of 'em." She kept her eyes on the mirror, before which she sat combing her hair. "Rozh'd like to've met you when you came, but he's too busy studying. 'S not all fun, being Pres'dent."

"Rozh? A brother? But you said your father—"

"Well, Joe won' live forever, you know. Rozh has to be prepared."

"But this—hey, wait!"

She gave him a direct glance. "Don' you un'erstan'? Rozh is Joe's oldes' son by his chief ortho-wife. So he'll be the next Pres'dent."

"Oh." Barlow sat for a while. At last: "Is the succession like that in all the other offices?"

"What else? It'd be an unnatural father who didn' han' on his position to his heirs, wouldn' it?" Amily finished combing her locks, sprang up, and blew him a kiss. "I *mus'* run. 'Bye, darling." She hurried from the room. A moment later he heard her aircar take off.

Alone, he fretted for a while. But after all, he told himself, in the total context of history, hereditary government was the norm, elective government the deviation. Given proper training . . . modern genetics also, no doubt, and medicine, so there were no defectives . . . the same family might provide wise rulers for hundreds of years.

He was too tired to think further. Sleep swooped on him.

Soft music awoke him at dusk. A man entered, bearing a tray with tea and cookies. He was a burly fellow, with shaven pate and gray clothes like the garage attendants. His face was expressionless. He set the tray on the bed and prostrated himself.

After he had lain there for a number of seconds, Barlow snapped nervously, "Well, what's the matter with you?"

"My owner hasn' commanded me t' arise," responded a dead voice.

"Huh?"

Another man drifted in. He was more gaily clad, in some kind of livery, but his skull was as bare as the other's. "If my owner please," he said, "his bath an' garments 're ready. It's soon time for the banquet."

Barlow swung his feet to the carpet. "Good Lord!" he exploded. His tea spilled on the prostrate man, and it was hot, but there was no stir or whimper.

When he had argued his way to comprehension—which was not easy, both his chattels being

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invincibly stupid—Barlow stood for a long while staring at the wall. Well, he told himself at last, in a remote fashion, when fifteen billion people are jammed together on one impoverished planet, they are bound to become a cheap commodity.

With the help of some more tranquilizer, he made a creditable entrance at the feasting place and chatted with many of Earth's rulers. Their total number was small, and he learned they were careful to restrict their own reproduction, lest the power they had be divided. However, they were no more conscious of tyrannizing the unfree than a rancher would be of unfairly dominating his cattle. Their welcome to Barlow was warm and genuine. When Amily took his arm and led the procession into the dining room, he began to feel that he had come home.

The hors d'oeuvres, soup, and salad were delicious. Then, proud and fond, Amily's father stood up to do the honors as the main course was brought in: roast suckling coolie.

INSIDE THE COMET, by Arthur C. Clarke

(continued from page 38)

—that's far too complicated—but the simpler one of giving us an orbit that will bring us back into radio range. Once we've escaped from the electrical interference around us, we can radio our position and the big computers on Earth can tell us what to do next.

"We've already broken away from the comet and are no longer heading out of the Solar System. Our new orbit checks with the calculations, to the accuracy that can be expected. We're still inside the comet's tail, but the nucleus is a million miles away and we won't see those ammonia icebergs again. They're racing on towards the stars into the freezing night between the suns, while we are coming home. . . .

"Hello, Earth . . . hello, Earth This is *Challenger* calling, *Challenger* calling. Signal back as soon as you receive us—we'd like you to check our arithmetic—before we work our fingers to the bone!"

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Richard Matheson has been absent from these pages in recent years, primarily because of his heavy book, motion picture and television work schedule. We are particularly pleased, therefore, to have this new tale, concerning the unbearable presence in a plush New York apartment of the dark magic of Africa.

FROM SHADOWED PLACES

by Richard Matheson

DR. JENNINGS HOOKED IN toward the curb, the tires of his Jaguar spewing out a froth of slush. Braking hard, he jerked the key loose with his left hand while his right clutched for the satchel at his side. In a moment, he was on the street, waiting for a breach in traffic.

His gaze leaped upward to the windows of Peter Lang's apartment. Was Patricia all right? She'd sounded awful on the phone—tremulous, near to panic. Jennings lowered his eyes and frowned uneasily at the line of passing cars. Then, as an opening appeared in the procession, he lunged forward.

The glass door swung pneumatically shut behind him as he strode across the lobby. *Father, hurry! Please! I don't know what to do with him!* Patricia's stricken voice re-echoed in his mind. He stepped into the elevator and pressed the tenth-floor button. *I can't tell you on the phone! You've got to come!* Jennings stared ahead with sightless eyes, unconscious of the whispering closure of the doors.

Patricia's three-month engagement to Lang had certainly been a troubled one. Even so, he wouldn't feel justified in telling her to break it off. Lang could hardly be classified as one of the idle rich. True, he'd never had to face a job of work in his entire twenty-seven years. But he wasn't indolent or helpless. One of the world's ranking hunter-sportsmen, he handled himself and his chosen world with graceful authority. There was a readily mined vein of humor in him and a sense of basic justice despite his air of swagger. Most of all, he seemed to love Patricia very much.

Still, this trouble, whatever it

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was, that had come up while the doctor had been away.

Jennings twitched, blinking his eyes into focus. The elevator doors were open. He strode rapidly down the hall, shoe heels squeaking on the polished tile.

A penciled note was tacked unevenly to the door. *Come in.* Jennings felt a tremor at the sight of Pat's hurried scrawl. Bracing himself, he went inside. . . .

And stopped short. The living room was a shambles, chairs and tables overturned, lamps broken, a clutter of books hurled across the floor and, scattered everywhere, a debris of splintered glasses, matches, cigarette butts. Dozens of liquor stains splotched the white carpeting. On the bar, an upset bottle trickled Scotch across the counter edge; from the giant wall speakers, a steady rasping flooded the room. Jennings stared, aghast. *Peter must have gone insane.*

He shed his hat and coat, then crossed to the built-in high fidelity unit and switched it off.

"Father?"

"Yes." Jennings heard his daughter sob with relief, and hurried toward the bedroom.

They were on the floor beneath the picture window. Pat was on her knees embracing Peter, who had drawn his naked body into a tight huddle, arms pressed across his face. As Jennings knelt beside them, Patricia looked at him with terror-haunted eyes.

"He tried to jump," she said; "he tried to kill himself."

"All right." Jennings drew away the rigid quiver of her arms and tried to raise Lang's head. Peter gasped, recoiling from his touch and bound himself again into a ball of limbs and torso. Jennings stared at his constricted form, at the crawl of muscles in Peter's back and shoulders. Snakes seemed to writhe beneath the sun-darkened skin.

"How long has he been like this?" he asked.

"I don't know." Her face was a mask of anguish. "I don't know."

"Go in the living room and pour yourself a drink," her father ordered. "I'll take care of him."

"He tried to jump right through the window."

"Patricia."

She began to cry and Jennings turned away; tears were what she needed. Once again, he tried to uncurl the inflexible knot of Peter's body. Once again, the young man gasped and shrank away from him.

"Try to relax," said Jennings, "I want to get you on your bed."

"No!" said Peter, his voice a pain-thickened whisper.

"I can't help you, boy, unless—"

Jennings stopped, his face gone blank. In an instant, Lang's body had lost its rigidity. His legs were straightening out, his arms were slipping from their tense position at his face.

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Peter raised his head. His face was darkly bearded, bloodless, stark-eyed, the face of a man enduring unendurable torment.

"What *is* it?" Jennings asked, appalled.

Peter grinned, not pleasantly. "Hasn't Patty told you?"

"Told me what?"

"I'm being hexed," Peter said. "Some scrawny—"

"Darling, *don't,*" begged Pat.

"What are you talking about?" demanded Jennings.

"Drink?" asked Peter. "Darling?"

Patricia pushed unsteadily to her feet and started for the living room. Jennings helped Lang to his bed.

"What's this all about?" he asked.

Lang fell back heavily on his pillow. "What I said," he answered. "Hexed. Cursed. Witch doctor." He snickered feebly. "Bastard's killing me. Been three months now—almost since Patty and I met."

"Are you—" Jennings began.

"Codeine ineffectual," said Lang. "Even morphine—got some. Nothing." He sucked in at the air. "No fever, no chills. No symptoms for the AMA. Just . . . someone killing me." He peered up through slitted eyes. "Funny?"

"Are you serious?"

Peter snorted. "Who the hell knows?" he said. "Maybe it's delirium tremens. God knows I've drunk enough today to—" The tangle of his dark hair rustled on the pillow as he looked toward the window. "Hell, it's night," he said. He turned back quickly. "Time?" he asked.

"After ten," said Jennings. "What about—?"

"Thursday, isn't it?" asked Lang.

Jennings stared at him.

"No, I see it isn't." Lang started coughing dryly. "Drink!" he called. As his gaze jumped toward the doorway, Jennings glanced across his shoulder. Patricia was back.

"It's all spilled," she said, her voice that of a frightened child.

"All right, don't worry," muttered Lang. "Don't need it. I'll be dead soon anyway."

"Don't talk like that!"

"Honey, I'd be glad to die right now," said Peter, staring at the ceiling. His broad chest hitched unevenly as he breathed. "Sorry, darling, I don't mean it. Uh-oh, here we go again." He spoke so mildly that his seizure caught them by surprise.

Abruptly, he was floundering on the bed, his muscle-knotted legs kicking like pistons, his arms clamped down across the drumhide tautness of his face. A noise like the shrilling of a violin wavered in his throat and Jennings saw saliva running from the corners of his mouth. The doctor moved quickly toward his bag.

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Before he'd reached it, Peter's thrashing body had fallen from the bed. The young man reared up, screaming, on his face the wide-mouthed, slavery frenzy of an animal. Patricia tried to hold him back but, with a snarl, he shoved her brutally aside and staggered for the window.

Jennings met him with the hypodermic. For several moments, they were locked in reeling struggle, Peter's distended face inches from the doctor's, his vein-corded hands scrabbling for Jennings' throat. He cried out hoarsely as the needle pierced his skin and, springing backward, lost his balance, fell. He tried to stand, his crazed eyes looking toward the window. Then the drug was in his blood and he was sitting with the flaccid posture of a rag doll. Torpor glazed his eyes. "Bastard's killing me," he muttered.

They laid him on the bed and covered up his sluggish twitching.

"Killing me," said Lang, "Black bastard."

"Does he really *believe* this?" Jennings asked.

"Father, *look* at him," she answered.

"You believe it too?"

"I don't know!" She shook her head impotently. "All I know is that I've seen him change from what he was to—*this*. He isn't sick, Father. There's nothing wrong with him." She shuddered. "Yet he's dying."

Jennings drew his fingers from the young man's fluttering pulse. "Has he been examined at all?"

She nodded tiredly. "Yes," she answered. "When it started getting worse, he went to see a specialist. He thought, perhaps his brain . . ." She shook her head. "There's nothing wrong with him."

"But why does he say he's being. . .?" Jennings found himself unable to speak the word.

"I don't know," she said. "Sometimes, he seems to believe it. Mostly he jokes about it."

"But on what grounds—?"

"Some incident on his last safari," said Patricia. "I don't really know what happened. A Zulu native threatened him; said he was a witch doctor and was going to—" Her voice broke. "Oh, God, how can such a thing be true? How can it *happen?*"

"The point, I think, is whether Peter actually believes it's happening," said Jennings. He turned to Lang. "And, from the look of him . . ."

"Father, I've been wondering if —if maybe Doctor Howell could help him."

Jennings stared at her a moment. Then he said, "You *do* believe it, don't you?"

"Father, *try to understand.*" There was a trembling undertone of panic in her voice. "You've seen Peter only now and then. I've watched it happening to him almost day by day. Something is de-

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stroying him! I don't know what it is but I'll try anything to stop it. *Anything.*"

"All right." He pressed a reassuring hand against her back. "Go phone while I examine him."

After she'd gone into the living room—the telephone connection in the bedroom had been ripped from the wall—Jennings drew the covers down and looked at Peter's bronzed, muscular body. It was trembling with minute vibrations—as if, within the chemical imprisoning of the drug, each separate nerve still pulsed and throbbed.

Jennings clenched his teeth. Somewhere at the core of his perception, he sensed that medical inquiry would be pointless. Still, he felt distaste for what Patricia might be setting up. It went against the scientific grain, it offended reason.

Also, it frightened him.

The drug's effect was almost gone now, Jennings saw. Ordinarily, it would have rendered Lang unconscious for six to eight hours. Now—in *forty minutes*—he was in the living room with them, lying on the sofa in his bathrobe, saying, "Patty, it's ridiculous. What good's another doctor going to do?"

"All right then, it's ridiculous!" she said, "What would you like us to do—just stand around and watch you—" She couldn't finish.

"Shhh." Lang stroked her hair with trembling fingers. "Patty, Patty. Hang on, darling. Maybe I can beat it."

"You're *going* to beat it." Patricia kissed his hand. "It's both of us, Peter. I won't go on without you."

"Don't *you* talk like that." Lang twisted on the sofa. "Oh, Christ, it's starting up again." He forced a smile. "No, I'm all right," he told her. "Just . . . crawly, sort of." His smile flared into a sudden grimace of pain. "So this Doctor Howell is going to solve my problem, is he? How?"

Jennings saw Patricia bite her lip. "It's a—*her,* darling," she told Lang.

"Great," he said. He twitched convulsively. "That's what we need. What is she, a chiropractor?"

"She's an anthropologist."

"Dandy. What's she going to do, explain the ethnic origins of superstition to me?" Lang spoke rapidly as if trying to outdistance pain with words.

"She's been to Africa," said Pat. "She—"

"So have I," said Peter. "Great place to visit. Just don't play around with witch doctors." His laughter withered to a gasping cry. "Oh, God, you scrawny, black bastard, if I had you here!" His hands clawed out as if to throttle some invisible assailant.

"I beg your pardon—"

They turned in surprise. A young Negro woman was looking

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down at them from the entrance hall.

"There was a card on the door," she said.

"Of course; we'd forgotten." Jennings was on his feet now. He heard Patricia whispering to Lang, "I *meant* to tell you. Please don't be biased." Peter looked at her sharply, his expression even more surprised now. *"Biased?"*

Jennings and his daughter moved across the room.

"Thank you for coming." Patricia pressed her cheek to Dr. Howell's.

"It's nice to see you, Pat," said Dr. Howell. She smiled across Patricia's shoulder at the doctor.

"Had you any trouble getting here?" he asked.

"No, no, the subway never fails me." Lurice Howell unbuttoned her coat and turned as Jennings reached to help her. Pat looked at the overnight bag which Lurice had set on the floor, then glanced at Peter.

Lang did not take his eyes from Lurice Howell as she approached him, flanked by Pat and Jennings.

"Peter, this is Dr. Howell," said Pat. "She and I went to Columbia together. She teaches anthropology at City College."

Lurice smiled. "Good evening," she said.

"Not so very," Peter answered. From the corners of his eyes Jennings saw the way Patricia stiffened.

Dr. Howell's expression did not alter. Her voice remained the same. "And who's the scrawny, black bastard you wish you had here?" she asked.

Peter's face went momentarily blank. Then, his teeth clenched against the pain, he answered, "What's that supposed to mean?"

"A question," said Lurice.

"If you're planning to conduct a seminar on race relations, skip it," muttered Lang. "I'm not in the mood."

"Peter."

He looked at Pat through pain-filmed eyes. "What do you want?" he demanded. "You're already convinced I'm prejudiced, so—" He dropped his head back on the sofa arm and jammed his eyes shut. "Jesus, stick a *knife* in me," he rasped.

The straining smile had gone from Dr. Howell's lips. She glanced at Jennings gravely as he spoke. "I've examined him," he told her. "There's not a sign of physical impairment, not a hint of brain injury."

"How should there be?" she answered, quietly. "It's not disease. It's ju-ju."

Jennings stared at her. "You—"

"There we go," said Peter, hoarsely. "Now we've got it." He was sitting up again, whitened fingers digging at the cushions. "That's the answer. *Ju-ju.*"

"Do you doubt it?" asked Lurice.

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"I *doubt* it."

"The way you doubt your prejudice?"

"Oh, Jesus. *God.*" Lang filled his lungs with a gutteral, sucking noise. "I was hurting and I wanted something to hate so I picked on that lousy savage to—" He fell back heavily. "The hell with it. Think what you like." He clamped a palsied hand across his eyes. "Just let me die. Oh, Jesus, Jesus God, sweet Jesus, *let me die.*" Suddenly, he looked at Jennings. "Another shot?" he begged.

"Peter, your heart can't—"

"*Damn* my heart!" Peter's head was rocking back and forth now. "*Half* strength then! You can't refuse a dying man!"

Pat jammed the edge of a shaking fist against her lips, trying not to cry.

"*Please!*" said Peter.

After the injection had taken effect, Lang slumped back, his face and neck soaked with perspiration. "Thanks," he gasped. His pale lips twitched into a smile as Patricia knelt beside him and began to dry his face with a towel. "Greetings, love," he muttered.

Peter's hooded eyes turned to Dr. Howell. "All right, I'm sorry, I apologize," he told her, curtly. "I thank you for coming but I don't believe it."

"Then why is it working?" asked Lurice.

"I don't even know what's happening!" snapped Lang.

"I think you do," said Dr. Howell, an urgency rising in her voice. "And *I* know, Mr. Lang. Ju-ju is the most fearsome pagan sorcery in the world. Centuries of mass belief alone would be enough to give it terrifying power. It *has* that power, Mr. Lang. You know it does."

"And how do *you* know, Dr. Howell?" he countered.

"When I was twenty-two," she said, "I spent a year in a Zulu village doing field work for my Ph.d. While I was there, the *ngombo* took a fancy to me and taught me almost everything she knew."

"*Ngombo?*" asked Patricia.

"*Witch doctor,*" said Peter, in disgust.

"I thought witch doctors were men," said Jennings.

"No, most of them are women," said Lurice. "Shrewd, observant women who work very hard at their profession."

"*Frauds,*" said Peter.

Lurice smiled at him. "Yes," she said. "They are. Frauds. Parasites. Loafers. Scare-mongers. Still—what do you suppose is making you feel as if a thousand spiders were crawling all over you?"

For the first time since he'd entered the apartment, Jennings saw a look of fear on Peter's face. "*You know that?*" Peter asked her.

"I know everything you're going through," said Dr. Howell. "I've been through it myself, during that year. "A witch doctor from

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a nearby village put a death curse on me. Kuringa saved me from it."

"Tell me," said Peter. Jennings noticed that the young man's breath was quickening. It appalled him to realize that the second injection was, already, beginning to lose its effect.

"Tell you what?" said Lurice. "About the long-nailed fingers scraping at your insides? About the feeling that you have to pull yourself into a ball in order to crush the snake uncoiling in your belly?"

Peter gaped at her.

"The feeling that your blood has turned to acid?" said Lurice. "That, if you move, you'll crumble because your bones have all been sucked hollow?"

Peter's lips began to shake.

"The feeling that your brain is being eaten by a pack of furry rats? That your eyes are just about to melt and dribble down your cheeks like jelly? That—?"

"That's enough." Lang's body shuddered spasmodically.

"I only said these things to convince you that I know," said Lurice. "I remember my own pain as if I'd suffered it this morning instead of seven years ago. I can help you if you'll let me, Mr. Lang. Put aside your skepticism. You *do* believe it or it couldn't hurt you, don't you see that?"

"Darling, *please*," said Patricia.

Peter looked at her. Then his gaze moved back to Dr. Howell.

"We musn't wait much longer, Mr. Lang," she warned.

"All right." He closed his eyes. "All right then, try. I sure as hell can't get any worse."

"Quickly," begged Patricia.

"Yes." Lurice Howell turned and walked across the room to get her overnight bag.

It was as she picked it up that Jennings saw the look cross her face—as if some formidable complication had just occurred to her. She glanced at them. "Pat," she said, "come here a moment."

Patricia pushed up hurriedly and moved to her side. Jennings watched them for a moment before his eyes shifted to Lang. The young man was starting to twitch again. *It's coming*, Jennings thought.

"What?"

Jennings glanced at the women. Pat was staring at Dr. Howell in shock.

"I'm sorry," said Lurice. "I should have told you from the start but there wasn't any opportunity."

Pat hesitated. "It has to be that way?" she asked.

"Yes. It does."

Patricia looked at Peter with a questioning apprehension in her eyes. Abruptly, then, she nodded. "All right," she said. "But hurry."

Without another word, Lurice Howell went into the bedroom. Jennings watched his daughter as she stared intently at the closed door.

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The bedroom door opened and Dr. Howell came out. Jennings, turning from the sofa, caught his breath. Lurice was naked to the waist and garbed below with a skirt composed of several colored handkerchiefs knotted together. Her legs and feet were bare. Jennings gaped at her. The blouse and skirt she'd worn had revealed nothing of the sinuous beauty of her body.

Jennings turned his eyes toward Pat; her expression, as she stared at Dr. Howell, was unmistakable now.

Jennings looked back at Peter. Due to its masking of pain, the young man's face was more difficult to read.

"Please understand, I've never done this before," said Lurice, embarrassed by their staring silence.

"We understand," said Jennings, once more unable to take his eyes from her.

A bright red spot was painted on each of her tawny cheeks and, over her twisted, twine-held hair, she wore a helmet-like plume of feathers, each of a chestnut hue with a vivid white eye at the tip. Her breasts thrust out from a tangle of necklaces made of animals' teeth, skeins of brightly colored yarn, beads, and strips of snake skin. On her left arm—banded at the bicep with a strip of angora fleece—was slung a small shield of dappled ox-hide.

She moved toward them with a shy, almost childlike defiance—as if her shame was balanced by a knowledge of her physical wealth. Jennings was startled to see that her stomach was tattooed, hundreds of tiny welts forming a design of concentric circles around her navel.

"Kuringa insisted on it," said Lurice, as if he'd asked. "It was her price for teaching me her secrets." She smiled fleetingly. "I managed to dissuade her from filing my teeth to a point."

Jennings sensed that she was talking to hide her embarassment and he felt a surge of empathy for her as she set her bag down, opened it and started to remove its contents.

"The welts are raised by making small incisions in the flesh," she said, "and, pressing into each incision a dab of paste." She placed on the coffee table a vial of grumous liquid, a handful of small, polished bones. "The paste I had to make myself. I had to catch a land crab with my bare hands and tear off one of its claws. I had to tear the skin from a living frog and the jaw from a monkey." She put on the table a bundle of what looked like tiny lances. "The claws, the skin and the jaw, together with some plant ingredients, I pounded into the paste."

Jennings looked surprised as she withdrew an LP record from the bag and set it on the turntable.

"When I say *'Now,'* Doctor,"

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she asked, "will you put on the needle arm?"

Jennings nodded mutely.

As she squatted to set the various objects on the floor, it became apparent that underneath the skirt of handkerchiefs, Lurice's loins were uncovered.

"Well, I may not live," said Peter—his face was almost white now—"but it looks as if I'm going to have a fascinating death."

"If the three of you will sit in a circle," Lurice said. The prim refinement of her voice coming from the lips of what seemed a pagan goddess struck Jennings forcibly as he moved to assist Lang.

The seizure came as Peter tried to stand. In an instant, he was in the throes of it, groveling on the floor, his body doubled, his knees and elbows thumping at the rug. Abruptly, he flopped over, forcing back his head, the muscles of his spine tensed so acutely that his back arched upward from the floor. Pale foam ribboned from the slash of his mouth, his staring eyes seemed frozen in their sockets.

"Lurice!" screamed Pat.

"There's nothing we can do until it passes," said Lurice. She stared at Lang with sickened eyes. Then, as his bathrobe came undone and he thrashed naked on the rug, she turned away, her face tightening with a look which Jennings interpreted, to his disquietude, as a look of fear. Then he and Pat were bent across Lang's afflicted body, trying to hold him.

"*Let him go,*" said Lurice, "There's nothing you can do."

Patricia glared at her in frightened animosity. As Peter's body finally shuddered into immobility, she drew the edges of his robe together and refastened the sash.

"*Now.* Into the circle; quickly," said Lurice, clearly forcing herself against some inner dread. "No, he has to sit alone," she said, as Patricia braced herself beside him, supporting his back.

"He'll *fall,*" said Pat, an undercurrent of resentment in her voice.

"Patricia, if you want my help—"

Uncertainly, her eyes drifting from Peter's pain-wasted features to the harried expression on Lurice's face, Patricia edged away and settled herself.

"Cross-legged, please," said Lurice, "Mr. Lang?"

Peter grunted, eyes half-closed.

"During the ceremony, I'll ask you for a token of payment. Some unimportant personal item will suffice."

Peter nodded. "All right; let's go," he said. "I can't take much more."

Lurice's breasts rose, quivering, as she drew in breath. "No talking now," she murmured. Nervously, she sat across from Peter and bowed her head. Except for Lang's stentorian breathing, the room grew deathly still.

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Jennings could hear, faintly, in the distance, the sounds of traffic. He tried, in vain, to clear his mind of misgivings. He didn't believe in this. Yet here he sat, his crossed legs already beginning to cramp. Here sat Peter Lang, obviously close to death with not a symptom to explain it. Here sat his daughter, terrified, struggling mentally against that which she, herself, had initiated. And here, most bizarre of all, sat—not Dr. Howell, an intelligent professor of anthropology, a cultured civilized woman—but a near-naked African witch doctor with her implements of barbarous magic.

There was a rattling noise. Jennings blinked his eyes and looked at Lurice. In her left hand, she was clutching the sheaf of what looked like miniature lances. With her right, she was picking up the cluster of tiny, polished bones. She shook them in her palm like dice and tossed them onto the rug, her gaze intent on their fall.

She stared at their pattern on the carpeting, then picked them up again. Across from her, Peter's breath was growing tortured. What if he suffered another attack? Jennings wondered. Would the ceremony have to be re-started?

He twitched as Lurice broke the silence.

"Why do you come here?" she asked. She looked at Peter coldly, almost glaring at him. "Why do you consult me? Is it because you have no success with women?"

"What?" Peter stared at her bewilderedly.

"Is someone in your house sick? Is that why you come to me?" asked Lurice, her voice imperious. Jennings realized abruptly that she was, completely now, a witch doctor questioning her male client, arrogantly contemptuous of his inferior status.

"Are you *sick?*" She almost spat the words, her shoulders jerking back. Jennings glanced involuntarily at his daughter. Pat was sitting like a statue, cheeks pale, lips a narrow, bloodless line.

"Speak up, man!" ordered Lurice, the scowling *ngombo.*

"Yes! I'm sick!" Peter's chest lurched with breath. "I'm *sick.*"

"Then speak of it," said Lurice. "Tell me how this sickness came upon you."

Either Peter was in such pain now that any notion of resistance was destroyed—or he had been captured by the fascination of Lurice's presence. Probably it was a combination of the two, thought Jennings, as he watched Lang begin to speak, his voice compelled, his eyes held by Lurice's burning stare.

"One night, this man came sneaking into camp," he said. "He tried to steal some food. When I chased him, he got furious and threatened me. He said he'd kill me." Jennings wondered if Lurice

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had hypnotized Peter, the young man's voice was so mechanical.

"And he carried, in a sack at his side . . ." Lurice's voice seemed to prompt like a hypnotist's.

"He carried a doll," said Peter. His throat contracted as he swallowed. "It spoke to me," he said.

"The fetish spoke to you," said Lurice. "What did the fetish say?"

"It said that I would die. It said that, when the moon was like a bow, I would die."

Abruptly, Peter shivered and closed his eyes. Lurice threw down the bones again and stared at them. Abruptly, she flung down the tiny lances.

"It is not Mbwiri nor Hebiezo," she said. "It is not Atando nor Fuofuo nor Sovi. It is not Kundi or Sogbla. It is not a demon of the forest which devours you. It is an evil spirit which belongs to a *ngombo* who has been offended. The *ngombo* has brought evil to your house. The evil spirit of the *ngombo* has fastened itself upon you in revenge for your offense against its master. Do you understand?"

Peter was barely able to speak. He nodded jerkily. "Yes."

"Say—*Yes, I understand.*"

"Yes." He shuddered. "Yes. I understand."

"You will pay me now," she told him.

Peter stared at her for several moments before lowering his eyes. His twitching fingers reached into the pockets of his robe and came out empty. Suddenly, he gasped, his shoulders hitching forward as a spasm of pain rushed through him. He reached into his pockets a second time as if he weren't sure that they were empty. Then, frantically, he wrenched the ring from the third finger of his left hand and held it out. Jennings' gaze darted to his daughter. Her face was like stone as she watched Peter handing over the ring she'd given him.

"Now," said Lurice.

Jennings pushed to his feet and, stumbling because of the numbness in his legs, he moved to the turntable and lowered the needle arm in place. Before he'd settled back into the circle, the room was filled with drumbeats, with a chanting of voices and a slow, uneven clapping of hands. His gaze intent on Lurice, Jennings had the impression that everything was fading at the edges of his vision, that Lurice, alone, was visible, standing in a dimly nebulous light.

She had left her ox-hide shield on the floor and was holding the bottle in her hand. She pulled the stopper loose and drank the contents with a single swallow. Vaguely, Jennings wondered what it was she'd drunk.

The bottle thudded on the floor.

Lurice began to dance.

She started languidly. Only her arms and shoulders moved at first, their restless sinuous motion timed

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to the cadence of the drumbeats. Jennings stared at her, imagining that his heart had altered its rhythm to that of the drums. He watched the writhing of her shoulders, the serpentine gestures she was making with her arms and hands. He heard the rustling of her necklaces. Time and place were gone for him. He might have been sitting in a jungle glade, watching the somnolent twisting of her dance.

"Clap hands," said the *ngombo.*

Without hesitation, Jennings started clapping in time with the drums. He glanced at Patricia. She was doing the same, her eyes still fixed on Lurice. Only Peter sat motionless, looking straight ahead, the muscles of his jaw quivering as he ground his teeth together. For a fleeting moment, Jennings was a doctor once again, looking at his patient in concern. Then, turning back, he was re-drawn into the mindless captivation of Lurice's dance.

The drumbeats were accelerating now, becoming louder. Lurice began to move within the circle, turning slowly, arms and shoulders still in undulant motion. No matter where she moved her eyes remained on Peter, and Jennings realized that her gesturing was exclusively for Lang—drawing, gathering gestures as if she sought to lure him to her side.

Suddenly, she bent over, shook herself with abandon, swinging her breasts from side to side and rattling her necklaces, her wild face hovering inches over Peter's. Jennings felt his stomach muscles pulling in as Lurice drew her talon-shaped fingers over Peter's cheeks, then straightened up and pivoted, her shoulders thrust back carelessly, her teeth bared in a grimace of savage zeal. In a moment, she had spun around to face her client again.

A second time she bent herself, this time stalking back and forth in front of Peter with a cat-like gait, a rabid crooning in her throat. From the corners of his eyes, Jennings saw his daughter straining forward. The expression on her face was terrible.

Suddenly, Patricia's lips flared back as in a soundless cry. Leaning over, Lurice had clutched her breasts with digging fingers and was thrusting them at Peter's face. Peter stared at her, his body trembling. Crooning again, Lurice drew back. She lowered her hands and Jennings tightened as he saw that she was pulling at the skirt of handkerchiefs. In a moment, it had fluttered to the carpeting and she was back at Peter. It was then that Jennings knew exactly what she'd drunk.

"No." Patricia's venom-thickened voice made him twist around, his heartbeat lurching. She was starting to her feet.

"*Pat!*" he whispered.

She looked at him and, for a

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moment, they stared at each other. Then, with a violent shudder, she sank to the floor again and Jennings turned away from her.

Lurice was on her knees in front of Peter now, rocking back and forth and rubbing at her thighs with flattened hands. She couldn't seem to breathe. Her open mouth kept sucking at the air with wheezing noises. Jennings saw perspiration trickling down her cheeks; he saw it glistening on her back and shoulders. No, he thought. The word came out automatically, the voicing of some alien dread that seemed to rise up, choking, in him. No. He watched Lurice's hands clutch upward at her breasts again. Drumbeats throbbed and billowed in his ears. His heart beat pounded.

No!

Lurice's hands had clawed out suddenly and torn apart the edges of Lang's robe. Patricia's gasp was hoarse, astounded. Jennings caught only a glimpse of her distorted face before his gaze was drawn back to Lurice. Swallowed by the frenzied thundering of the drums, the howl of chanting voice, the explosive clapping, he felt as if his head were going numb, as if the room were tilting. In a dream-like haze, he saw Lurice's hands reached out to Peter. He saw a look of nightmare on the young man's face as torment closed a vise around him—torment which was just as much carnality as agony. Lurice moved closer to him. Closer. Now her sweat-laved body writhed inches from his own.

"Give it to *me.*" Her voice was bestial, gluttonous. "Give it to *me.*"

"Get away from him." Patricia's gutteral warning tore Jennings from entrancement. Jerking around, he saw her reaching for Lurice—who, in that instant, clamped herself on Peter's body.

Jennings lunged at Pat, sensing that he must. She twisted wildly in his grip, her hot breath spilling on his cheeks, her body violent in rage.

"Get away from him!" she screamed at Lurice. *"Get your hands away from him!"*

"Patricia!" Jennings snapped. "Let me *go!*"

Lurice's scream of anguish paralyzed them. Stunned, they watched her flinging back from Peter and collapsing on her back, her legs jerked in, arms flung across her face. Jennings felt a burst of horror. His gaze leaped up to Peter's face. The look of pain had vanished from it. Only stunned bewilderment remained.

"What *is* it?" gasped Patricia.

Jennings' voice was hollow, awed. *"She's taken it away from him,"* he said.

"Oh, my God . . ." Aghast, Patricia watched her friend.

The feeling that you have to pull yourself into a ball in order

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to crush the snake uncoiling in your belly. The words assaulted Jennings' mind. He watched the rippling crawl of muscles underneath Lurice's flesh, the spastic twitching of her legs. Across the room, the record stopped, and, in the sudden stillness, he could hear a shrill whine quavering in Lurice's throat. *The feeling that your blood has turned to acid, that, if you move, you'll crumble because your bones have all been sucked hollow.* Eyes haunted, Jennings watched her suffering Peter's agony. *The feeling that your brain is being eaten by a pack of furry rats, that your eyes are just about to melt and dribble down your cheeks like jelly.* Lurice's legs kicked out. She twisted onto her back and started rolling on her shoulders. Her legs jerked in until her feet were resting on the carpet. Convulsively, she reared her hips. Her stomach heaved with tortured breath, her swollen breasts lolled from side to side.

"Peter!"

Patricia's horrified whisper made Jennings' head snap up. Peter's eyes were glittering as he watched Lurice's thrashing body. He had started pushing to his knees, a look not human drawn across his features. Now his hands were reaching for Lurice. Jennings caught him by the shoulders but Peter didn't seem to notice. He kept reaching for Lurice.

"Peter."

Lang tried to shove him aside but Jennings tightened his grip. *"For God's sake*—use your mind, man!" Jennings ordered. "Your *mind!"*

Peter blinked. He stared at Jennings with the eyes of a newly awakened man. Jennings pulled his hands away and turned back quickly.

Lurice was lying motionless on her back, her dark eyes staring at the ceiling. Jennings leaned over and pressed a finger underneath her left breast. Her heartbeat was nearly imperceptible. He looked at her eyes again. They had the glassy stare of a corpse. Suddenly, they closed and a protracted, body-wracking shudder passed through Lurice. Jennings watched her, open-mouthed, unable to move. No, he thought. It was impossible. She couldn't be—

"Lurice!" he cried.

She opened her eyes and looked at him. After several moments, her lips stirred feebly as she tried to smile.

"It's over now," she whispered.

The car moved along Seventh Avenue, its tires hissing on the slush. Across the seat from Jennings, Dr. Howell slumped motionless in her exhaustion. A shamed, remorseful Pat had bathed and dressed her, after which Jennings had helped her to his car. Just before they'd left the apartment, Peter had attempted to

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thank her, then, unable to find the words, had kissed her hand and turned away in silence.

Jennings glanced at her. "You know," he said, "if I hadn't, actually, seen what happened tonight, I wouldn't believe it for a moment. I'm still not sure that I do."

"It isn't easy to accept."

"You told Patricia what was going to happen?"

"No," said Lurice, "I couldn't tell her everything. I tried to brace her for the shock of what was coming but, of course, I had to withhold some of it. Otherwise, she might have refused my help—and her fiancé would have died."

"It was an aphrodisiac in that bottle, wasn't it?"

"Yes," she answered, "I had to lose myself. If I hadn't, personal inhibitions would have kept me from doing what was necessary."

"What happened just before the end of it—" Jennings began.

"Mr. Lang's apparent lust for me?" said Lurice. "It was only a derangement of the moment. The sudden extraction of the pain left him, for a period of seconds, without conscious volition. Without, if you will, civilized restraint. It was an animal who wanted me, not a man."

Minutes later, Jennings parked in front of Dr. Howell's apartment house and turned to her.

"I think we both know how much sickness you exposed—and cured tonight," he said.

"I hope so," said Lurice. "Not for myself but—" She smiled a little. "*Not for myself I make this prayer,*" she recited, "Are you familiar with that?"

"I'm afraid I'm not."

He listened quietly as Dr. Howell recited again. Then, as he started to get out of the car, she held him back. "Please don't," she said. "I'm fine now." Pushing open the door, she stood on the sidewalk. For several moments, they looked at each other. Then Jennings reached over and squeezed her hand.

"Good night, my dear," he said.

Lurice Howell returned his smile. "Good night, Doctor."

Jennings watched her walk across the sidewalk and enter her apartment house. Then, drawing his car into the street again, he made a U-turn and started back toward Seventh Avenue. As he drove, he softly repeated the Countee Cullen poem which Lurice had spoken for him:

Not for myself I make this prayer
But for this race of mine
That stretches forth from shadowed places
Dark hands for bread and wine.[1]

Jennings' fingers tightened on the wheel.

"Use your mind, Man," he said. "Your *mind*."

[1] *From "Pagan Prayer," which appears in* ON THESE I STAND, *by Countee Cullen (Harper)*

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Katherine MacLean is one of the very few "names" in science fiction who has never before appeared in F&SF. It is pleasant to repair that omission, and particularly so with this neat tale of poise, and counterpoise.

INTERBALANCE

by Katherine MacLean

THE BAREFOOT GIRL STOOD staring at the house. Behind her was the property wall, nine feet high and painted bright blue; the gate was a good distance away. She should not have come in. She was trespassing on private property. The day before she had stood closer to the gate, and the day before that she had stood in the archway of the entrance. Right behind where she stood this day there was a cluster of palm scrub, but she did not hide; instead she stood in the open, conspicuously and defiantly staring at the house.

From the house, viewed through the sights of a rifle by old dim eyes, she was a small wavering figure.

The old man looking through the rifle sights muttered angrily and pulled the rifle back. He began to range through the house looking for a window from which he could see the girl clearly enough for a good shot.

There was more going on in the big house. Unseen by the old man, a tall boy went out onto the steps of the house and waved at the girl urgently signalling her to come closer.

She saw the boy, but she did not see the old man. Hesitantly, she moved a few yards closer to the house, and then stopped, digging her toes into the alien softness of the close-cropped green lawn. Outside the wall there was no grass, only sand and bushes, ocean and jungle, and palm-thatched brick houses on stone streets that ran slanting into the mountains. The house she stared at was different in many ways. Its owner wore a full suit of clothes and would speak only English; he came out from behind his wall only once a month to buy provisions and arrange for workers for his property. He was considered to be insane, and when three people disappeared in one year

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there were horrible rumors about what he had done to them. However he also had the only machine gun on their side of the topless mountains, and so the villagers were polite and obliging to him, and shrugged. Even if the rumors were true, why worry? The old man would die of old age soon.

The girl remembered all this. The rumors were probably lies. Many lies were made up to be frightening and amuse a dull evening in the rainy season. She believed that they were lies, but she felt danger and glanced quickly from side to side and behind her, feeling as she might if there were a jaguar near.

The boy gestured again for her to come closer, but she shook her head and waited. Presently he grew tired of gesturing and came across the lawn to her. He was a tall gangling boy, big for fifteen, with a white shirt with long sleeves, and trousers and shoes, pale complexion and brown combed hair—altogether an antique and strange appearance, like that of the North Americans before the Radiation.

"What are you doing here?" he demanded as soon as he came close. "My father is very angry because you were here yesterday." The boy looked quickly over his shoulder at the house, a glance more of nervousness than observation. "I think he is asleep. He won't see us from the windows if we talk on the porch."

"No," she said firmly. "No closer." She spoke English, and he was surprised. The palm trees bent over the brick wall around his world, and the thunder of the surf was always close, and it was nothing like the pictures of the lands where English was spoken.

They glanced at the house apprehensively. The heavy brick front of the big building had recessed windows, glassless and half-shuttered with pools of shadow within; the darkness of the shaded interior of the house looked out like the black pupil of an eye. They looked away with a deep breath, and he looked at the girl. She was also only fourteen or fifteen, small, brown and pretty, dressed in a blue and green cloth that covered one breast and left the other bare. Her skin was brown and smooth and clean, and her hair was black and her eyes blue.

"Why are you here?" he demanded.

She looked at his eyes and then looked at his shirt with obvious wonderment. "Why do you stay inside your wall? We are going on a party to the jungle tonight. We bring bread and cheese. Have fun." Her high-pitched young voice was plaintive. "Many years now I see you in the windows of your house and behind the wall. My name is Narine.

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You are a man now. You can come out."

"My father doesn't want me to associate with villagers," the boy explained.

The old man in the house tried to get a clear shot at the girl. She was closer now, and made a larger target, but her blue and green dress blended too well with the blue and green of the wall and bushes behind her. His eyes watered and his hand wavered and he found his sights crossing the white shirt of his son, who for some reason was talking to the trespasser.

The hunter muttered curses against old age and radiation, and remembered that the cellar had windows. The cellar windows, at grass level, would silhouette them both sharply against the bright sky, and make them visible even to a man half blind. He hurried for the stairs.

"You are a man now," the girl said. "He will die soon: old men always die. God will protect you. Come to the picnic, we will have fun, we will dig, and we will go far out."

The boy looked down at her from a superior height. "I can't waste my time playing or going on picnics. I am being educated."

She made her eyes round, waiting to understand what he meant, and looked admiringly at his grey eyes and intelligent expression.

The boy's slender shoulders straightened as he explained and he seemed to grow taller. "My father is educating me against the Tide of Advancing Savagery. He is teaching me to be Civilized and Carry on Progress." It was obviously a quotation in someone else's tone of voice; he stood proudly and touched the breast of his white shirt as if it were a badge.

She nodded admiringly, but was still puzzled. "How does he do this, Man?"

The boy had not heard this expression, Man, before in English, but it seemed to be a compliment. He raised his chin and looked more authoritative. "My father teaches me things like mathematics, advanced mathematics. He is a fine teacher. His father was a Ph.D. and a teacher in the States. He says that they don't teach civilization any more, anywhere."

He looked at the palm trees leaning over the blue-painted wall, and listened to the distant rumble of the surf, and remembered that he had never spoken to anyone outside except the foremen of the work gangs that picked his father's fields. The girl seemed to be educated, although she spoke a strange English. He looked at the girl, her smooth brown skin, her blue eyes, and the dress that covered only one breast, and he grew confused. "Do they—I mean, is civilization . . ."

"Civilization?" The pretty

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brown girl was still uncertain about the question. "I don't dig . . . I mean, we don't force anyone to learn! An answer without a question means nothing. Karma is that you want to learn as much as you deserve to know. There is a man in Yelopo, five miles away, who likes numbers. He plays with number theories, and puzzles all the time. When someone here in Puerto needs a problem solved, they measure with a string and make drawings and take the string and the drawings to him. He solves it and they pay him in hens and pigs." She smiled. "See, we need only one man to do mathematics, and we have only one man. The good god of Interbalance takes care of it for us."

He was insulted. "One mathematician—that's not civilization!" He lifted his eyes to the mountains behind the village. They towered into the sky, nobly high, like ideals.

"My fathers both paint pictures," she said in her high pitched, apologetic worried voice as he stared angrily away from her. "They also fish and pick papaya, of course. The pictures are very strange, but not as strange as my grandfather's pictures. Everyone should do what his spirit calls him to do. If my little brothers wanted to study mathematics I would look through the empty houses and find books for them."

The mountains he stared at, although lofty, were covered with jungle, and in the distance a tiny figure, leading a burro, wended slowly up a mountain trail. The girl talked as if she were being tolerant, allowing him to study. It was all wrong and unlike the right principles, and he grew more angry.

She touched his sleeve timidly with a single finger. "If you *like* to study . . ."

"No!" he snapped, still not looking at her. The burro and the villager on the mountain trail moved upward slowly, looking almost like ants. "I don't like mathematics at all. I don't like studying. I do it anyhow. Father says doing what you don't like hardens you and gives you discipline." He looked at her contemptuously. "Father is right. You're all a bunch of degenerating savages!"

The brown girl in the blue dress raised a small fist to hit him, and instead stamped her feet, squealing with rage. "I am not degenerate! My name is Narline Robinson. My Father Robinson, good family. My mothers, Lopez, Rothberg, and Sumpello. We are the best family—thirteen children not monsters, born handsome and six still alive, healthy, almost adults. Two of my mothers still alive and young. I am the oldest child. I will make grandparents of them and they will be proud."

She stopped for breath and looked suspiciously at his clothing

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as if wondering suddenly what they covered. "You, you only-son. Are you a monster?"

"No," he almost shouted. His shirt blazed white in the sunlight and he looked at the exit arch in the wall, confusedly thinking of escape from the talking. "I'm fine. Radiation hasn't done a thing to me. Father says he was always careful to stay indoors. And he keeps me in, too. I can't go on a picnic. Go away—he might see you!"

Suddenly she had stopped being angry. She was smiling, looking at him warmly. "Come with me on a picnic." She reached out daringly and tugged at his hand. "Look how close the gate is. We can go by ourselves. We can play and help humanity. We can talk and dig each other and build counterpoint."

The boy did not understand the last remarks, but he understood temptation. He glanced at the exit gate, feeling her hand in his, and dropped her hand, growing pale.

"Are you afraid of him?" she asked, lowering her voice.

"He wouldn't do anything to me," the boy said without certainty. "I'm his son."

The old man propped open a cellar window and discovered that it was as he had thought—the conversationalists made two perfect black outlines against the blue sky. He aimed at the smaller silhouette.

"The village people are afraid of him too," she said in a low voice. "Does he really catch people and pull them to bits in a dungeon?"

"I don't know." From talking in the sun, his pale skin was getting an unaccustomed flush, but he paled again. "My father doesn't tell me anything. He just educates me."

She shrugged. "They hear screaming."

"Maybe. Or maybe it's him screaming. He gets very angry sometimes in his radiation laboratory."

"*Radiation laboratory . . .*"

She made the sign to ward off evil and sank to the lawn; she succeeded in being graceful and did not faint, but her knees had bent under her involuntarily. This was the most forbidden of evil things, held in horror by the entire human race, and here she was only fifty feet from a house containing it.

The old man in the basement took his finger from the trigger and cursed as the smaller silhouette sank down out of sight of his ground-level eye. He rushed for the stairs.

"No no, you misunderstand," the boy said, bending over her urgently. "It's a secret. I should not have told. I didn't intend to mention it. But he's not making more radiation. He is trying to make people immune to radiation. To save the race."

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"Oh," she said forgivingly, looking up at him, and she managed a weak giggle. "But Man, we already know what to do to save the race. Breed. There aren't enough people. Lots of empty houses. Most babies damaged by the radiation, they don't live long enough to be born even, or not much after that. We all help. We try to make lots of babies. Breed and use no medicine." She giggled again, and leaned in a comfortable lounging position on the lawn, looking reminiscent. "It is not easy to make babies. But it is fun trying. It is good for the race."

She smiled at him while he blushed. "Why don't you come on a picnic. Tonight there is five. Very far out. Very interbalanced. Very new for you I guess, but Pang Ho."

A dim voice from the direction of the house hissed, "Hussy!"

She had been heard.

The boy moved between her and the house. "Get up," he whispered, bending over her. "Walk toward the gate. I'll walk right behind you, between you and the house, so he can't see you."

"Is he awake?" Her eyes rounded until they were as large as rabbits' eyes, and suddenly in them was the delayed fear of being pulled apart in a mysterious dungeon. Fear grew into panic, and she whimpered in a tiny strangled sound.

"It will be all right," he said, bending over her. "Get up carefully."

Slowly the pair straightened and they began walking away from the house with his body between her and the house, and the eye of the rifle.

"Hussy!" hissed the old man, and dashed across the great wide shadowed mahogany floor past rows of shuttered windows. He was a lean old man, leanly fitted in a dacron grey suit that hung on him as if it had been originally fitted for someone younger with a thicker chest. The suit was one of the silkily perfect suits put out by the States just before the big confusion and the radiation came all over the world.

He went out of the half-opened front door and down the stairs and across the lawn in a tiptoeing run.

The couple was moving toward the gate single file over the grass.

His son was saying, "I won't be able to go with you on this picnic, girl. When is the next one?"

"STOP!" the old man bellowed, more to stop what was being said than to stop their motion toward the gate.

They turned and he stood with his feet braced and the rifle pointing at them both. He was a magnificent old man, incredibly old, with white hair, a lean, lined face and old eyes, and bony withered hands holding the gun almost

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without tremor. One accumulated radiation sickness slowly and evenly from the air with the years, and it was impossible to find any difference between radiation sickness and age, so the villagers had given up having two names for the same thing. He was forty, and he was old, very old. Very few men lived past their forties, but this man fought the advance of age with inflexible determination and personal resentment, as if it were an enemy.

Outrage held him upright and alert.

"Leo, where are you going with that girl?"

"Just as far as the gate, Father."

"Stand away from her. I'm going to make her an example to trespassers. I'll teach these degenerates to stay away."

"She's not doing any harm, Father."

The fierce old man snorted, almost a laugh. "I heard her. She's a degenerate, a savage. And she wants you to become one too. She is against morality and discipline. She believes in having fun when The Situation Is Desperate. When the Future Is at Stake. When the Issue Is Serious. My father knew how to deal with types like this. My father shot a beatnik in front of me, and I can shoot a degenerate." His voice rang with savage satisfaction.

"But Man," his son said, remembering the flattering and pleasant word the girl had used to him. "She's a good girl. Don't be childish, Man." Nervously he hoped that the word would remind his father that a man had the duty to be moderate and keep good judgment.

His father's complexion turned a shade of light violet, and his rifle muzzle began to wander back and forth vaguely.

"What was that you said, Leo?" he asked in a strange small voice.

It seemed to be changing his attitude. It was worth repeating.

"I said," his son repeated firmly, "don't be childish, Man."

His father's complexion darkened to purple and his eyeballs turned red. *"They're closing in!"* he shrieked in a loud voice. *"Aarwk!"* He fell over backward and the rifle discharged and blew a hole in a leaf of a palm tree. Everything became very quiet and there was only the distant rumble of the surf, and the squawk of a tropical bird.

"See," said the girl, after a pause to see if anything else would happen. "I told you not to worry. God takes care of everything. There is Interbalance."

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They had flung themselves over the void to where the stars clustered thick as grapes on autumn vines, had done what no people from Earth had ever done before . . . .

THE SIGHT OF EDEN

by Howard Fast

THEY WERE IN ORBIT, AND IT was over. They had crossed the void, leaped all the gaps of time and imagination, and bridged the unbridgeable, and they had been through the seven fires of hell. They were sane, although they had touched all the fringes of insanity. They could smile, although they had known all the profound depths of grief and suicidal depression; and they were alive, although they had flirted with all the varieties of death that boundless space can concoct.

They had come through fear and terror indescribable, and now they could speak about it and to each other. There were seven of them, three women and four men, and they had been locked away in this starship for five interminable years. They were light years beyond calculation from the Planet Earth; they had leaped their ship across the strange curves and tricks of space, played havoc with all the calculus and geometry known to men, and had flung themselves over the void to where the stars clustered thick as grapes on autumn vines. They had done what they were ordained to do, and what no people from the Planet Earth had ever done before. And now they were in silent, flowing orbit over a planet as blue and green and lovely as the one they had left behind them.

It was something to think about and to crow about. It gave them a sense of themselves that was unique. It made them look at each other in a certain way as they sat together in the wardroom. They had done it.

For that reason, all words that could be said to the point were pointless; in five years, all the words had been said, all the reactions had been tested, all the tears had been wept. Now there remained only the fact, and the fact was the planet beneath them,

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bathed in sunshine, washed with air, and laced with rivers and lakes and lagoons. It was the proof of the universe, all they had ventured their lives and sanity to prove—proof that life was not limited to the Planet Earth and the Solar System, but was a part of the logic of the universe. The fact was a planet slightly larger than Earth, perhaps of somewhat less density, with a breathable nitrogen-oxygen atmosphere, well-watered and with abundant plant life. Its revolution upon its axis was thirty hours; its year, as well as they could calculate, was four hundred and fifteen days. It's sun was a Sol-type sun, somewhat better than 900,000 miles in diameter and at this moment 112,000,576 miles from the planet it warmed. There were eleven other planets in the system; but first this one, the other ten could wait.

Their own orbit time was five hours and sixteen minutes, and since they had gone into orbit to study the planet, their starship had made eight revolutions. This was their final meeting in the wardroom for comparative discussion. It would be a short meeting, and then they would descend.

Briggs, the pilot and as much the captain as anyone was captain on the starship, looked from face to face and said, "Not very much left to talk about, unless someone has a reason not to go down?"

"All the reasons," Frances Rhodes, the physician, nodded. "Bugs, germs, virus, radiation—and none of them hold water." She smiled—and she was lovely then, as they all were in the radiance of their accomplishment. "We'd go down if they had the plague, wouldn't we?"

They would have gone down if it were boiling lava under them, because they had endured all the confinement that is endurable and had felt all the nakedness of empty space that men can feel and remain sane.

"I'm not worried about bugs," Carrington, the agronomist, said. "Disease doesn't work that way. Not about radiation either. Something else."

Gene Ling, second navigator and Nobel Prize winner, nodded. She was a slender, gentle half-Chinese from San Francisco. "Yes, something else," she said. "No oceans."

"No deserts either," said Carrington.

"No lights in the cities at night," said Gluckman, the engineer.

"If they are cities." McCaffery, the navigator.

"The nights are full of starlight," Briggs thought. "Perhaps they sleep at night. It must be different. Why do we forget how different it must be?"

"They must see us," said Laura Shawn, the biologist. "Why don't

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they call to us, signal us, come up to us?"

"They?"

"In the scopes, it looks like fairyland," Phillips, 2nd engineer, observed self-consciously. "I don't like that."

"Where was your childhood, Phillips?"

"I don't like it."

"Arms?" Gluckman wanted to know.

"I suppose so," said Briggs uneasily. "Sidearms anyway."

"In fairyland?" Laura Shawn smiled.

But it wasn't as light and pleasant as it seemed, and if it went on this way, Briggs realized, it could top a note of hysteria. They were clinging to reality with a thin hold, and the meeting was pointless and becoming too long.

"We go down now," Briggs said. "Go to your stations."

They were relieved, and they didn't want to talk about it. They went to their stations, and the starship slid down its electro-magnetic web until it rode its anti-gravitic tensors a foot above the planet's surface. Then they opened their airlocks and went out.

The air was sweet as honey. Where the sun shone, it was warm and beneficent and in the shade it was seventy degrees Fahrenheit. They had landed upon a broad meadow, half a thousand acres of meadow where the green grass was cropped an inch high; but when they examined it, they saw that it bent upon itself and controlled and conditioned itself. Through the meadow, winding lazily, a little river took its way, and the banks of the river were lined with a million flowers of red and blue and yellow and every other color. Bees hummed among the flowers and the air was full of their fragrance, and here and there about the meadow was a tree heavy with blue or golden fruit. About a half a mile down the river, a filigree bridge arched gracefully.

They had been five years in the starship, so at first they just stood and looked and breathed the air. Then some of them sat down on the grass. They all wept a little; that was to be expected. If they had faced danger or horror or the unbelievable, their reaction would have been different. It was the beauty and the peace, almost unendurable, that made them weep. They felt better when they had but mostly they sprawled on the grass and listened to the soft breeze blowing. No one said anything and no one wanted to say anything. A half hour went by, and Briggs said:

"We can't just stay here."

"Why not?" Laura Shawn wanted to know.

They were all thinking, as Briggs also thought, that it was a dream or an illusion or that they

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were dead. It was a bubble that could burst, they were thinking; and Briggs said:

"Gluckman and Phillips—go into the ship and follow us!"

Then the other five set out on foot, with the great, shining starship sliding behind them on its magnetic web. They walked to the filigree bridge, which seemed to be made of crystal lace, and they crossed the river. A little road or pathway, full of dancing light and color, led up over the brow of a low hill. On the other side of the hill was a garden and in the center of the garden a building that was like a castle in fairyland or a dream, or the laughter of children, if a building can be like laughter of children.

If the building was like the laughter of children, then the garden was like all the dreams that city children ever dreamed about a garden. It was about a mile square, and as Briggs led them on a winding path through it, it appeared to open endless arms of delight and wonder. There were the fountains. Golden water from one, pink water from another, green water from a third, a rainbow of colors from a fourth—and there were hundreds of fountains, ornamented with dancing, laughing children carved out of stone of as many different shades as the water showed. There were nooks and corners of secret delight. There were benches to rest on that were marvels of beauty and comfort. There were hedges of green and yellow and blue. There were beds of flowers and bold beautiful birds, and there were drinking fountains to quench the thirst of those who used the garden.

Gene Ling bent to drink at one of these. They watched her, but they didn't try to stop her.

"It's water," she said. "Clean and cold."

Then they all drank. They didn't care. Their defenses were crumbling too quickly.

Gluckman brought the starship to rest in front of the building, and all seven of them went inside together. As they entered, music began, and they stopped nervously.

"It's automatic," McCaffery guessed. "Body relay or photo electric."

Their momentary nerves could not contend against the music—an outpouring of sound that vibrated with welcome and assurance and sheer delight—that filled them with a sense of innocence and purity. Wherever they went in the building, the music was with them. They went into an auditorium large enough to hold a thousand people, but empty, and with a great silver screen at one end. They wandered along empty corridors, lined with colorful and masterful murals of naked children at play. They looked into rooms full of couches, where the

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music made them drowsy almost immediately, and there were other rooms that were dining rooms, play rooms, classrooms—all recognizable and all different. In each case, they sensed that this was how it should be, and in each case, the memories of earth which they used for comparison become crude and ugly. They left, and went back to the starship.

With its viewplates open, the starship moved across the planet's surface, a hundred feet above the ground. They saw gardens as beautiful and more beautiful than the one they had been in. They saw forests of old and splendid trees, with colored paths among the trees. They saw mighty amphitheatres that could seat a hundred thousand people and smaller ones too. Buildings of glass and alabaster, pink stone and violet stone, green crystal. They saw groups of buildings that reminded them of the Acropolis of ancient Athens, if the Athenians had but a thousand years more to work and plan for some ultimate beauty. They saw lakes where boats were moored to docks, ready for use, but small boats, pleasure boats. They saw bathing pavilions—or so they surmised—playing fields, arbors, bowers, every structure for beauty and delight that they had ever imagined and a thousand that they had never imagined.

But nowhere did they see a living man, woman or child.

After nightfall, after they had eaten, they sat and talked. Their talk went in circles, and it was full of fear and speculation. They had come too far; space had enveloped them, and although their starship hung a thousand feet in the air above a planet as large as the Planet Earth, they felt that they had passed across the edge of nowhere.

"Just suppose," Carrington said, "that all our dreams had taken shape."

"All the memories and wishes of our childhoods," said Francis Rhodes.

"Taken shape," Carrington repeated. "Who knows what the fabric of space is or what it does?"

"It does strange things," Gene Ling, the physicist, agreed.

"Or what thought is," Carrington persisted. "A planet like this one—it's a fairy land—it's the stuff of dreams—all the dreams we brought with us from home, all the longings and desires, and out of our thoughts it was shaped."

"Who was it said, we will make the earth like a garden?"

"Oh, I don't buy any of that," Briggs said, more harshly than was called for, because he found himself leaning toward the madness of their theories. "I don't buy it one bit! It's metaphysical bosh, and you're all falling for it. You

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don't think a planet into existence."

"How do you know?" Laura Shawn asked dreamily.

"How do I know? I know. I know the fact and the substance of dreams and the fact and the substance of matter, and the two are different!"

"And we trap a curve of space and go from tomorrow into yesterday—is that real?" asked Gene Ling.

"This planet is real," Briggs insisted.

"Without people?"

"Or cities?"

"Industry? You don't spin palaces out of thin air—or do you, Briggs? Where is the industry?"

"Who cultivates it?" Carrington, an agronomist and in mental agony over this. "Who tends a million flower beds? Who fertilizes it? Who plants? Who crops the hedges?"

"And who paints the murals of earth children? And who carves the statues of Earth children?"

"Why must they be Earth children?" Briggs said slowly and doggedly. "Why must man be a freak of Earth, an accident on one planet out of a billion? Is the sun an accident?"

Carrington said, "I could swear by all we believe in that those flower beds were tended yesterday. Where are the people today?"

"If there is any today—"

"Enough of that," Briggs snapped. "We've seen only a tiny corner of this world. Tomorrow, we'll see more of it. Eight hours sleep won't hurt any of us, and maybe it'll clear some of the metaphysical cobwebs away."

Tomorrow came, and at a speed of five hundred miles an hour, the starship cruised across the planet, a thousand feet high. They sat at the viewplates, and looked at gardens and lakes and golden, winding rivers, and palaces and all the joyous beauty that man had ever imagined and so much that he had never imagined. They watched it until it became unbearable in its glowing abundance, and then the sun set. But they saw no people. The world was empty.

That night, they talked again; and when they had talked themselves close to the edge of madness, Briggs ordered them to silence and sleep. But he knew that he was not too far from the edge of madness himself.

On the third day, the starship came to rest on the edge of a lake whose shores were marked with pleasure houses and dream places. They could think of no other names for the buildings. Phillip and Gluckman remained with the ship; Briggs led the others down to a dock that appeared to be carved out of alabaster, and he selected a boat moored there

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large enough to hold them all. As they took their places in the boat, it stirred to life with the strange, haunting music of the planet, and the music washed away their fears and their cares, and Briggs saw that they were smiling at some inner fulfillment.

"We could remain here," Laura Shawn said lazily.

Briggs knew what she meant. Five years in the starship had merged all their secrets, all their memories. Laura Shawn was a product of poverty, unhappiness, and finally divorce. Her scientific triumphs had left a string of emotional defeats behind her. She had never been happy before, and Briggs wondered whether any of them had? Yet they were happy now—and he himself, too, for all of his struggle to preserve in himself a fortress of skepticism and wary doubt. Doubt was anathema in this place.

The boat had a wheel and a lever. The lever gave it motion; the wheel steered it. There was no sign of a propeller; it glided through the water by its own inner force; but this was not disturbing since their own starship rode the waves and currents of magnetism and force that pervaded the universe. So it was, Briggs through to himself, with all the mysteries and wonders that man had faced from his very beginning; they were miracles and beyond explanation until man discovered the reason, and then in the simplicity and self-evidence of the reason, he could smile at his former fear and superstition. Was this planet any more wonderful or puzzling than the web of force that held the universe in place and order? And when the explanation came, if it ever did, he was certain it would be simple and even obvious.

Meanwhile, he steered the boat across the lake, and as they skirted the shore, building after building welcomed them with music and invited them to its own particular pleasure. He ran the boat through a canal bordered with great, flower-bearing trees, into another lake, where the water was so clear and pure that they could see all the gold and red and purple rocks on the bottom and watch gold and silver fish swimming and darting here and there. Then they entered a winding river, placid and lovely and bucolic, and they had gone a mile or so along this river, when they saw the man.

He stood on a landing place of pink, translucent stone, where there was a circle of carved benches, and he waved to them, almost casually. "Did we also think him into being?" Briggs asked caustically, as he turned the boat toward the dock. They rode to the mooring, and the man helped them out of the boat onto the steps that led up to the dock.

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He was a tall, well-built man, smiling and pleasant, his brown hair cut in the page-boy style of the olden times on Earth. He was of an indeterminate middle age, and he wore a robe of some light blue material, belted at the waist.

"Please—join me and make yourselves comfortable," he said to them, his voice warm and rich and his English without an accent. "I am sorry for these three days of bewilderment, but there were things I had to do. Now, if you will sit down here, we can relax for a while and talk about some problems we have in common."

His four companions were speechless; as for Briggs, he could only say, "Well, I'll be damned!"

"Call me Smith," he said. "I don't have a name in your sense of the word. Smith will make it easier for you. No, you're not dreaming. I am real. You are real. The place we are in is real. There is no reason for fear, believe me. Please sit down."

They sat down on the translucent benches. He answered the thought in their minds:

"No, I am not an Earth Man. Only a man."

"Then you read our minds?" Francis Rhodes wondered, not speaking aloud.

"I read your minds," Smith nodded. "That is one reason why I talk your language so easily."

"And the other reason?" McCaffery was thinking.

"We've listened to your radio signals many years—a great many years. I'm a student of English."

"And this planet," Briggs whispered. "Do you live here, alone?"

"No one lives here," Smith smiled, "except the custodians. And when we knew you would land here, we asked them to leave for a little while."

"In God's name," Carrington cried, "what is this place?"

"Only what it appears to be." Smith smiled and shook his head. "No mystery, believe me. What does it appear to be?"

"A garden," Laura Shawn said slowly, "the garden of all my dreams."

"Then you dream well, Miss Shawn," Smith nodded. "You have places like this on your planet—parks, playgrounds. This is a park, a playground for children. That's why no one lives here. It's a place for children to come to and play and learn a little about life and beauty—you see, in our culture, the two are not separate."

"What children?"

"The children of the Galaxy," Smith nodded, waving a hand toward the sky. "There are a great many children—a great many playgrounds and parks, not unlike this one. Today, it is empty—tomorrow, five million children—they come and they go, even as

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they do in your own parks—"

"Our own parks," Briggs was thinking bitterly.

"No, I am not sneering, Pilot Briggs. I am trying to answer your questions and your thoughts—and to connect these things with what you know and understand."

"You're telling us that the Galaxy is inhabited—by men?" Briggs asked.

"Why not by men? Can you really believe that man is an accident on one planet in a billion? Wherever there is life, in time man appears—and he lives now on more than half a million planets—in our galaxy alone. And he makes places like this place for his children."

"And who are you?" Carrington said. "And why are you here alone?"

"How would you think of me?" Smith wondered. "We don't have government in your terms. We don't have nations. I could call myself an administrator—we have a good many. And I was sent here to meet you and talk to you. We have been watching you for a long time, tracing you—yes, we've watched Earth too, for a long time."

"Talk to us—" Francis Rhodes said softly.

"Yes."

"About what?" Briggs demanded.

"About your sickness," Smith replied sadly.

An hour had passed. They sat silently, looking at Smith, and he watched them, and then Briggs said,

"For heaven's sake, don't pity us. We don't ask for pity—not from you or any of your breed of supermen."

"Not pity," Smith told them. "We don't have pity—it's a part of yourselves, not of us. Sorrow is a better word."

"Spare us that too," said Gene Ling.

Carrington refused to allow anger or impatience to disturb his own reasoning. He felt a compulsion to demonstrate to Smith that he could reason dispassionately, and he said quietly and firmly,

"You see, Smith—you ask a great deal when you ask us for an admission of our own insanity. You pointed out, quite properly, I think, that we were egotistical and unscientific to believe that man was limited by nature to one obscure planet on the edge of the Galaxy. I hold that it is just as unscientific for you to claim that of all the races of man on all the planets, only the people of Earth are mentally sick, emotionally unstable—yes, insane, the one word you were kind enough not to use—"

"Carrington, you're wasting your time," Briggs said sourly. "He can read our thoughts—all of them."

"Which doesn't change any of

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my arguments," Carrington said to Smith. "You mention our wars, our history of mass salughter, our use of atomic weapons, our record of murdering and destroying each other—but these are the particulars and the wasteful errors of our development—"

"They are the specifics of your development," Smith nodded reluctantly. "I hate to repeat that no other race of men in all the universe pursues murder as his major occupation and force of development—yet I must. Only on Earth—"

"But we are not all murderers," Frances Rhodes protested. "I am a physician. If you know Earth so well, you know the history of medicine and healing on Earth."

"A physician who carries a gun in a holster at her side," Smith shrugged.

"For my protection only!" she cried.

"Protection? Against whom, Miss Rhodes?"

"We didn't know—"

"I'm sorry," Smith sighed. "I'm sorry."

"I told you it's no use," Briggs snapped. "He reads our thoughts. He knows. God help us, he knows!"

"Yes, I know," Smith agreed.

"Then you must know that people like ourselves are not murderers," Carrington persisted, his voice still calm and controlled. "We are scientists. We are civilized people. You speak of how we are ridden with superstition, with gargantuan lies, with a love of the obscene and the monstrous. You mention half a billion Earth people who vocalize Christianity while none of them practice it. You talk about the millions we have slain in the name of freedom, brotherhood and God. You talk of our greed, our meanness, our perversion of love and sex and beauty—don't you realize that we know these things, that our best and bravest have struggled against them for ages?"

"I realize that," Smith nodded.

"He reads our thoughts," Briggs repeated stubbornly.

"We are scientists," Carrington continued. "We built this starship that brought us here. We lay in its hull for five endless years—that the frontiers of space might be conquered. And now, when we discover a universe of men—men talented and wonderful beyond all our dreams and imaginings, you tell us that this is barred to us forever—that we must live and die on our own speck of dust—"

"Yes, I am afraid it must be that way," Smith agreed.

"Everything but pity," said Laura Shawn.

Smith opened his robe, let it slip off his body to the ground, and stood before them naked. The women instinctively turned their heads away. The men reacted in

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shocked disbelief. Smith picked up his robe and clothed himself again.

"You see," he said.

The five men and women stared at him, realization dawning now.

"In all the universe," Smith said, "there is only one race of man that holds its bodies in shame and contempt. All others walk naked in pride and unashamed. Only Earth has made the image of man into a curse and a shame. What else must I say?"

"Do you intend to destroy us?" Briggs asked harshly.

Smith looked at us with regret. "We don't destroy, Briggs. We don't kill."

"What then?"

"You have something we don't have," Smith said softly, gently. "We had no need of it, but you had to create it—otherwise you would have perished in your sickness. You know what it is."

"Conscience," Gene Ling whispered.

"Yes—conscience. It will help. Go back to your starship and plot your course for home. And then you must make the decision to forget. When you make that decision, we will help you—"

"If we make it," Briggs said.

"If you make it," Smith agreed.

"Hold out some hope," Laura Shawn begged him. "Don't send us away like this. We came across —we were the first—"

"You weren't the first," Smith said, the sadness in his voice unbearable. "There were others from Earth, but each time they destroyed each other and the knowledge too. You weren't the first and you won't be the last—"

"Can we hope?" Laura Shawn pleaded.

"All men hope," Smith said. "More than that—I don't know."

The starship circled the beautiful planet, and the seven people of Earth sat in the wardroom. Gluckman and Phillips had been told of the encounter, and by now they had all discussed it into silence and weariness. Only Briggs had said nothing—until now, and now he said:

"Why can't we remember that he reads our thoughts? He knew."

"I'm selfish," Laura Shawn whispered through her tears. "It is easier to give up all it might mean to mankind than to give up my own memories."

"Of three days of childhood?" Briggs said bitterly. "To hell with that! To hell with his damned utopia! To hell with the stars! We'll make an atmosphere on Mars and drain the poison gas from Venus! To hell with him and his gardens! We have a job of work! So set your stinking course for home, McCaffery—and the rest of you to bed. There's another day tomorrow!"

That was the virtue of Briggs;

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for he more than any of them knew how right Smith was, and he wept his own tears into his pillow for hours before sleep came. In the morning, he was better. By then, the starship had flung itself a hundred million miles in the direction of home, and that gave Briggs a good feeling.

Like the others, he remembered only a wasteland of burning suns, and in all the galaxy, no other planets than those of the Solar System. Like the others, he knew that he was returning to a place unique and precious in its singularity—Earth, the sole habitat of man.

Through Time And Space With Ferdinand Feghoot: XXXII

In 3229, when Ferdinand Feghoot arose to deliver his famous report to the Society for the Aesthetic Rearrangement of History, his reception was hostile.

"Feghoot," cried Dr. Corydon Bramahpootra, the President, "is it not the purpose of our Society to make *all* history Classically perfect, as though Gibbon himself had composed it?—to change every event that is crude, inartistic? When we sent you back to the early 1960's, did we not ask you to avert the untidy Sino-Indian War?"

He gave Feghoot no chance to reply. "We did! And every day a Learned Commission examined the texts to see if they'd changed. Vast sums were wagered on your success; duels were actually fought. And what did you accomplish? At the peak of the crisis, you arranged for Premier Castro of Cuba to visit Prime Minister Nehru! You even mismanaged that, so that Castro wandered all over India sightseeing while his host waited for him in vain, getting more and more angry!"

Imperturbably, Feghoot nodded.

"Wretch!" screeched the Doctor. "You have betrayed our ideals! Was that in the Classical spirit of Gibbon?"

"Of course it was," answered Ferdinand Feghoot. "Now I can tell you how, as the fate of the world hung in the balance, Fidel roamed while Nehru burned."

—GRENDEL BRIARTON

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Time dilatation and hyperspatial drives may not be the only ways for us to get out to the stars. Possibly we shall walk before we fly . . . .

STEPPING-STONES TO THE STARS

by Isaac Asimov

THERE'S SOMETHING ESSENtially unsatisfactory to me about the conquest of the Solar system, which seems to be at hand. We know too much about what we'll find, and for us science-fictioneers, for myself, for The Kindly Editor, for all of us, what we'll find isn't enough.

After all, except for some possible lichen-like objects on Mars, the other worlds of the Solar system are all barren (barring a most unexpected miracle.)

Sure, we'll get all sorts of information and knowledge. In the process of reaching these barren worlds, we'll develop valuable alloys, plastics, fuels. We'll work up useful techniques of miniaturization, automation and computation. I wouldn't minimize any of these advances.

But— There will be no Martian princesses, no tentacled menaces, no superhumanly intelligent energy beings, no dreadful monsters to bring back to zoos. Gee whillikers, there won't be any romance!

For the proper results and rewards of space travel, we must reach the stars. We must find the Earth-type planets that possibly circle them, carrying upon them their full complement (we hope) of friend and foe, of superman and monster.

Only how do we get to the stars? The Moon may be on our doorstep and Mars may be just across the threshold, but the stars

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are way to hellangone (if The Kindly Editor will excuse the expression) out of sight.

The Moon is 222,000 miles away at its nearest and Mars is 35,000,000 miles away at its nearest. Even Pluto, the most distant of the known planets, is never further than 4,650,000,000 miles from us. On the other hand, the Alpha Centauri system, which includes the nearest stars to us, is 25,000,000,000,000 miles away.

In other words, when we've labored our way to the farthest edge of the Solar system and stand on Pluto, we have covered a distance which is, at best, less than 1/5,000 of the distance that must be covered if even the nearest star is to be reached.

In science fiction, we are used to a number of ways of overcoming this gap, from giant spaceships manned by generations to time dilatation to hyperspatial drives.

However, in this article I shall be prosaic. I shall suggest only that it would be so nice if there were stepping-stones to the stars —bodies between Pluto and the stars which would at least give us a breathing spell, a place to stop and rest on the long trip.

And having said that, I can smile cheerfully and say that there is good reason to believe that such stepping stones do exist. I do not refer to possible dark stars between us and Alpha Centuari, or to possible trans-Plutonian planets.

I refer, rather, to a shell of planetoids which surrounds the Sun, far beyond Pluto's orbit, with a dark halo; a shell of planetoids that dwarfs the known Solar system and which, in all probability, actually exists.

To tell the story of these planetoids, I shall, as is my wont, begin at the beginning. In this case, the beginning involves the comets.

Until very recently, comets have been considered portents of disaster, and with what seemed good reason.

After all, the heavens are, for the most part, a scene of quiet changelessness or, at most, of majestically periodic change. The sun rises and sets, the moon runs through its phases, the "fixed" stars maintain their positions exactly from generation to generation, and the planets wander among them in complicated, but predictable, paths.

All is well. All is peaceful.

Then, hurrying into view, apparently from nowhere, comes a comet. It is like nothing else in the heavens. A fuzzy patch of light, the "coma," surrounds a bright star-like nucleus, and extending from the coma is an arched tail that can stretch halfway across the heavens. Having

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come from nowhere, the comet finally vanishes into nowhere. There seemed no way of predicting either its coming or going and all one could say was that it had disturbed the peace and serenity of the skies.

This was in itself disturbing enough. Add to that the strangeness of its shape. It resembled a distraught woman, tearing across the sky in a hysterical frenzy, her unbound hair streaming behind her in the wind. The very word "comet" comes from the Greek "kometes" meaning "long-haired."

Naturally, any sensible man could suppose only that such a sudden and frightening apparition was sent by some god to warn humanity of disaster. And, furthermore, since life and humanity is such that disaster strikes every year without fail, this theory has always appeared to be borne out unmistakably. After a comet, disaster invariably follows. Within a year of the comet's appearance, there was sure to be a war, plague or famine somewhere, or *some* major catastrophe.

The last half-way spectacular comet showed up in 1910, and it succeeded in frightening many people into believing the end of the world would surely come. (It also, as any fool can plainly see, foretold the death of Mark Twain, the sinking of the Titanic, the coming of World War I and a whole slew of catastrophes.

However, portent or not, what is the nature of a comet? Aristotle, and the ancient and medieval thinkers who followed him, believed the heavens were perfect and unchangeable. Since comets came and went, having a beginning and an ending, which stars and planets did not, they were imperfect and changeable and, therefore, could not be part of the heavens. They were instead atmospheric phenomena; exhalations of bad air and therefore part of our own corrupt and miserable Earth.

This notion was not destroyed until 1577. The Danish astronomer, Tycho Brahe, measured the parallax of a bright comet that appeared that year, plotting its position as seen against the stars from his own observatory in Denmark and from another observatory in Prague. The parallax proved too small to measure. This is not surprising, considering the relative shortness of the baseline (about 500 miles) and the fact that this was before the days of the telescope. However, if the comet had been within 600,000 miles of the Earth, its parallax would have been perceptible. Tycho's conclusion, then, was that the comet had to be *at least* three times as far from the Earth as the Moon was. That made that comet, at any rate, part of the heavens; and Aristotle was wrong.

Even as part of the heavens

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rather than of the Earth, comets remained troublesome. They didn't fit into any system. When Copernicus put the Sun at the center of the Solar system and Kepler made planetary orbits into ellipses, the design of the planets began to fall neatly into place—except for the comets. They still came from nowhere, vanished into nowhere and represented an irritating lawlessness in the kingdom of the Sun.

Then came Newton and his law of gravitation that so neatly explained the planetary movements. Could it also explain cometary movements? That would indeed be an acid test.

In the year, 1704, Edmund Halley, a good friend of Newton, began to work out the orbits of various comets over the regions for which observational records existed, in order to see if their motions could be made to fit the requirements of gravitational mathematics. The records of twenty-four different comets were studied.

The one with the best available data was the comet of 1682, which Halley had himself observed. Working out its orbit, he noticed that it passed through the same regions of the sky as had the comet of 1607, seventy-five years before, and the comet of 1531, seventy-six years before that. Checking back, he found records of another comet in 1456, seventy-five years further back still.

Could it be that the same comet was coming back at intervals of seventy-five years or so, after passing over an elliptical orbit so eccentric that its far end reached out far beyond the orbit of Saturn, then the furthest planet known?

Halley felt certain that this was indeed so, and consequently predicted that the comet of 1682 would return once again in 1758.

It is one of the frustrations of scientific history that Halley knew he was not likely to live to see his prediction verified or exploded. He would have had to live to be 102 for that, and he didn't. He made a valiant try, reaching the age of 85, but that wasn't good enough.

On Christmas night, 1758, a comet was sighted and through early 1759, it rode high in the sky. The comet had indeed returned and it has been called "Halley's Comet" ever since. It was Halley's Comet that was in the sky in 1910.

The proof of Halley's theory created a sensation. Comets, or at least one comet, had been reduced to a commonplace, law-abiding member of the Solar system. Since then, many others have been supplied with definite orbits. And now, at last, there is no logical reason for considering comets divinely sent portents of disaster.—Which will not prevent some people preparing for the end of

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the world at the next appearance of a large comet, you may be sure.

Granted that comets are ordinary members of the Solar system, subject to the same laws of motion as are the sedate planets, what are they? Well, they aren't much.

Comets have frequently approached one or another of the various planets and have had their orbits altered, sometimes drastically, as a result of planetary gravitational attraction. (Such perturbations make it rather difficult to pinpoint the time of a comet's return.) An approached planet, for its part, has never in any way shown any measurable effect due to the comet's gravitational attraction. The comet of 1779 actually passed through Jupiter's satellite system without affecting the satellites in any way.

The obvious conclusion is that for all their gigantic volumes—and some comets are actually more voluminous than the Sun—comets have very small masses. The mass of even a large comet can be no larger than that of a middle-sized planetoid.

If this is so, the density of a comet must be extremely low, far lower than the density of Earth's atmosphere. This is demonstrated by the fact that stars can be seen through the tail of a comet with no perceptible diminution in brightness. The Earth passed through the tail of Halley's Comet in 1910 and there was no discernable effect. In fact, Halley's Comet passed between the Earth and the Sun and disappeared. The Sun shone through it as though it were vacuum.

Professor Fred Whipple of Harvard originated, some years ago, a now widely accepted theory of the composition of comets that accounts for all this. Comets, he supposes, are made up largely of "ices," that is, of low-melting solids such as water, methane, carbon dioxide, ammonia and so on. When far from the Sun, these substances are indeed solid and the comet is a small, solid body. As it approaches the Sun, however, some of the "ices" evaporate and the dust and gas that forms is forced away from the Sun by the radiation pressure of sunlight.

Sure enough (as was first observed in 1531) a comet's tail always points generally away from the Sun. It streams out behind the comet as the comet approaches the Sun, but it precedes the comet as it moves away from the Sun. Moreover, the closer to the Sun, the larger the tail.

Not as much atmosphere is formed, driven away by radiation pressure, and lost, as you might think. The "ices" themselves are poor conductors of heat and comets remain in the vicinity of the Sun only a comparatively short

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space of time. They retreat with most of their substance intact.

Nevertheless, at each return a comet does lose of its substance. Whatever passes into the tail vanishes into space and never returns. Several dozen passes at the Sun would probably suffice to finish a comet. Even a comet that returns only at intervals of a century or so can't be expected to last more than several thousand years at best. Therefore we ought, within historical times, see comets shrivel and die.

And we do. Halley's Comet at its return in 1910 was disappointingly dim, when compared with previous descriptions. It will probably be even more disappointing at its next scheduled appearance in 1986. It is dying.

And some comets have actually died as men watched. The best-known example is that of Biela's Comet, first discovered in 1772 by the German astronomer, Wilhelm von Biela. It had a period of about 6.6 years and was observed on a number of its returns. In 1846, it was found to have split in two, the halves travelling side by side. In 1852, the two parts had separated further. And Biela's Comet was never seen again. It had died.

But that's not the end of the story. Traveling in the orbit of the comet are a group of meteorites. We know because in 1872, Biela's Comet would have passed fairly close to the Earth if there had still been a Biela's Comet. There wasn't, but that year we were treated with a meteor shower radiating out of the spot where the Comet would have been located.

Apparently, embedded in the "ices" of the comet are a vast number of pebbles and pinpoints or less of metal and silicates. When the binding "ices" are gone, the contents fall apart. The small meteors and micrometeors that fill space now may thus be the ghosts of comets long dead.

Obviously, if comets have such short life-times and are still as numerous as they are (several new ones are discovered every year), even though the Solar system has been in existence for five billion years, a continual supply must be entering the system. But where are they coming from, then?

The easiest answer is that they come from interstellar space. They may be wanderers among the stars. Some may occasionally enter the gravitational field of the Sun, flash around it and go forever. Some enter, are captured by planets and become periodic comets, doomed to a quick death.

There are a couple of arguments against this possibility. First, to have interstellar migrants blundering into our Solar system at the rate they do, would require

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the filling of interstellar space with a most unlikely number of comets. Besides, more would enter the system from the direction toward which the Sun is travelling than from the other. That, however, is not so. Comets come from all directions equally.

Secondly, if comets entered the system randomly from outer space, a number should come and go in distinctly hyperbolic orbits (like a hairpin opened wide). No comet with a *distinctly* hyperbolic orbit has ever been observed.

In view of this, a more logical possibility is that the source of the comets is a local reservoir bound to the sun. It was suggested some years ago that this local reservoir exists in the form of a shell of "ice" planetoids, located from 1 to 2 light-years from the Sun in every direction.

It is easy to see how this shell may have come into existence. If the Solar system began as a vast turbulent cloud of dust and gas some light-years in diameter, the planets and present-day Sun would have been formed as it swirled and contracted. At the outskirts of the original cloud, however, the density would have been too low for planetary formation and, instead, there would be numerous local concentrations. Since the temperature has remained near the absolute zero throughout billions of years in that far-flung region, the "ices" which composed much of the original cloud would be retained even by the tiny gravity of the planetoids. (Nearer the Sun, the higher temperature has caused even as large a body as the Earth to lose much of its supply of "ices.")

There is an estimate to the effect that this shell of "cometary planetoids" contains 100,000,000,000 individuals, with a mass, all told, up to 1/100 or even possibly 1/10 that of the Earth. The average cometary planetoid would then have a mass of 600,000,000 to 6,000,000,000 tons. If we assumed the density of such a planetoid to be equal to that of ice, the average diameter would run, roughly, close to a mile.

You might think that a shell of a hundred billion planetoids ought somehow to make its presence known to observers on Earth. However, consider that the shell of space enclosing the Sun at a distance between 1 and 2 light years, has a volume of 30 cubic light years. This is immense! If the hundred billion cometary planetoids were evenly distributed through that volume, the average distance separating them would be about 1¼ billion miles, which is nearly the distance between ourselves and Uranus.

Naturally, a volume of space containing a mile-wide hunk of ice every billion miles or so is not

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going to make any impression at all at a distance of a light-year or more. The cometary planetoids will reveal themselves neither by luminosity nor by blocking the light of the stars.

Imagine a cometary planetoid somewhere in the middle of the shell. The Sun, from that distance, would seem merely a star, though still the brightest star in the sky, with a magnitude of —2. The planetoid would still be within the gravitational influence of the Sun (no other star would be as close) but that influence would be weak.

A cometary planetoid, 1½ light-years from the Sun, and traveling in a circular orbit about the Sun, would be whipped along under the feeble gravitational lash at a speed of only a little over 3 miles a minute. This may sound fast to the automobile driver, but the Earth moves along its orbit at a rate of 1100 miles a minute and even far-off Pluto never moves at a rate of less than 150 miles a minute.

At its slow rate of movement, it takes the average cometary planetoid 30,000,000 years to complete a revolution about the Sun. In all the existence of the Solar system, those far-distant planetoids have not, on the average, yet had time to revolve about the Sun 200 times.

But, if the cometary planetoids are circling quietly way out there, why do they not continue to circle there forever? What sends them down toward the Sun? The only possible answer seems to involve the interfering gravitational influence of the nearer stars. After all, the gravitational pull of Alpha Centauri on those cometary planetoids which happen to be directly between that star and the Sun, is ten percent that of the Sun, and that is not negligible. (Remember, Alpha Centauri is only 3 times as far from some of those planetoids as the Sun is.) A few other stars exert gravitational attractions for those planetoids nearest them to an amount of over 1 percent that of the Sun.

Now, then, if these stellar attractions catch a particular planetoid in such a way as to slow its orbital velocity, it must fall in toward the Sun, its circular orbit becoming elliptical. If the orbital velocity is slowed sufficiently, it must fall in toward the Sun so sharply as to enter the Solar system proper. It would gather speed as it did so, whip around the Sun and climb back to the point where the perturbation had taken place, then whip down again, climb back, whip down again and so on. If it came close enough to the Sun, it would develop a gigantic tail and coma of evaporating "ices" and would become visible to watchers on the Earth.

If only the Sun and the comet

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existed, this new, highly elliptical orbit would be permanent (barring additional stellar perturbation). A comet travelling in such an orbit would have a much shorter year than it did when it was in its shell, but its year would still be long by Earthly standards—about 10,000,000 years or so.

As far as man is concerned, such "long-period comets" would be one-shots. Any comet of this type appearing during historical times would not have been viewed by man on its previous visit, for he did not then exist. Moreover there is a distressingly good chance that man may no longer exist to see the next visit.

Of course, once a comet enters the Solar system proper, there is always the chance that it will come close enough to some planet to have its orbit affected. In some cases, its velocity will be speeded so that its orbit will become slightly hyperbolic and it may then leave the Solar system for good. In other cases, its velocity will be slowed and it will no longer gain the kinetic energy required to send it back to the cometary shell. It will often only recede no further than the neighborhood of the planetary perturbation, so that it will, in effect, have been "captured" by the planet.

All the outer planets have "families" of comets, that of Jupiter, very naturally, being the largest. Perhaps the most remarkable of the Jupiter family is Encke's Comet, the orbit of which was worked out in 1818 by the German astronomer, Johann Franz Encke, after it had been discovered by the French astronomer, Jean Louis Pons.

Encke's comet has the shortest period of any known comet—3.3 years. It never recedes further from the Sun than about 400,000,000 miles, which means that even at its most distant, it is never as far from the Sun as Jupiter is. It approaches fairly close to Mercury's orbit at its perihelion and its perturbation by Mercury has been used to calculate the mass of that small planet.

As you might expect, Encke's comet is dim and unspectacular, and it never develops a tail. It has been near the Sun far too many times to be anything else. Most of its "ices" are undoubtedly gone and it must now consist largely of a fairly compact silicate residue, thinly interlarded, perhaps, with the remnant of the original "ices."

Naturally, the cometary shell is being depleted by these stellar perturbations. Any cometary planetoid slowed and sent down into the Solar system proper is condemned to death. In addition, other cometary planetoids are speeded by stellar perturbations and may be forced into a hyperbolic orbit that drives them away from the Sun altogether.

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On the other hand, no cometary planetoids are being added to the shell as far as we know, so that the number continually declines.

However, this need not be a source of worry. It has been estimated that perhaps three new comets are sent hurling into the Solar system proper each year. We can suppose that three more are, on the average, speeded into hyperbolic loss in each year. At that rate, in the entire five-billion-year history of the Solarly system, 30,000,000,000 cometary planetoids have been lost or destroyed. That amounts to only 30 percent of the estimated number that still remains.

Despite the cometary death rate, then, our comets will be within their usual numbers, for billions of years more.

It is these cometary planetoids, to get back to the remarks I made at the very beginning of the article, which may represent the stepping stones to the stars.

If we could ever reach Pluto, it might not be too great a hop to reach one of the closer cometary planetoids; one that had been slowed into a relatively skimming approach toward the outskirts of the Solar system proper. Certainly not as great an effort would be required to reach such a planetoid as would be required to reach Alpha Centauri in one jump.

If a base could be set up on such a mile-wide hunk of "ices," perhaps we could continue to press outward into space from planetoid to planetoid in an island-hopping fashion, to the outermost fringes of the shell.

Nor would the two light-year mark necessarily end such island-hopping possibilities. After all, there is no reason to believe that Alpha Centauri doesn't have a halo of cometary planetoids of its own. Why shouldn't it have one? (Though perhaps a more complicated one since Alpha Centauri is really three stars.)

If it does have one, then Alpha Centauri and the Sun are close enough so that the outermost fringes of the halo of one ought to be rather close to the outermost fringes of the halo of the other.

Perhaps, then, we could island-hop over the ice all the way. Perhaps at no point will an uninterrupted trip of more than a few billion miles be required and perhaps we can reach the nearest star, at least, in the way a mountain-climber scales a high peak—by establishing a series of intermediate bases, like stepping-stones, all along the way.

I cannot honestly say that this makes a trip to the stars actually look inviting, but if we've got to go, surely it is easiest to go a step at a time.

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BOOKS

THE WORLDS OF CLIFFORD SIMAK. *Clifford Simak. Simon & Schuster, $3.75*

EIGHT KEYS TO EDEN. *Mark Clifton. Doubleday, $2.95*

OUT OF BOUNDS. *Judith Merril. Pyramid, 35¢*

THE INCOMPLETE ENCHANTER. *L. Sprague de Camp and Fletcher Pratt. Pyramid, 35¢*

FOR MANY YEARS A DEBATE HAS raged about the precise definition of science fiction and its exact distinction from fantasy. With the permission of our colleagues, we would like to sidestep the entire issue, leaving the quarrel to those who enjoy it most, and establish somewhat broader horizons for the work to be reviewed here.

This department will entertain any fiction that is a Flight of Fancy from the reality of Now . . . any imaginative flight into the future, the past, or the parapresent; any arresting concept based, perhaps, on a scientific premise, a philosophic foible, a cultural conceit (using "conceit" in the architectural sense), or even a bit of technical bravura.

If any book attempts such a Flight of Fancy, it should be welcomed by the reader; and it would be foolishly small-minded to object on the grounds that a work does not fit into some particular definition of fantasy or science fiction. We offer here, then, a warm welcome that most delicious offering of the artist . . . imagination.

One of the many tests of the artist's imagination is his attack on a story. Having blocked out the action and characters in his mind, he is forever presented with the problem: At what point in the action shall I commence? His object, of course, is to begin in such a way that the reader will be captured, involved, and compelled to continue.

Clifford Simak is a master of the Narrative Hook. In each of the twelve stories making up his collection THE WORLDS OF CLIFFORD SIMAK, he invariably captivates the reader and compells him to continue, even when he is dealing with material that is already familiar in theme. And this is no small feat.

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His style is gentle and rambling; one never knows where he's headed. This means his stories never suffer from the mechanical working out of plot which enables the reader to predict the action and resolution after the first two pages. Mr. Simak has a predilection for trading stories, and also favors the device of the extra-terrestrial being who brings about a series of inexplicable events on earth. This is the way his imagination is colored; and the results, far from being repetitive, are always charming.

Occasionally Mr. Simak makes a serious point, but he is never morbid, never violent, always good-tempered. There is no villainy in his comforting stories, and he does not suffer from the xenophobia that seems to haunt many authors when they write about other-world aliens. After this department finished his sunny collection, we felt a warm liking for Mr. Simak and his work, and we feel that you will, too.

Another of the interesting problems which an author faces is one of length. How much telling does a story deserve? How much does it demand? Half our decisions are guided by instinct, half by experience, and we often make mistakes. It's almost a commonplace for an author to begin what he assumes will be a short story, only to discover to his astonishment that he's involved in a novel. Occasionally he writes a novel that should have been a short story, which is the misfortune of Mark Clifton in EIGHT KEYS TO EDEN.

Mr. Clifton, whose story "What Thin Partitions" (written in collaboration with Alex Apostolides) is a delightful classic in fantasy writing, has created a most interesting background for his novel—a civilization led, guarded, and nurse-maided by Extrapolators. These "E's," as Mr. Clifton calls them (he refers to E McGinnis and E Gray) are "the super-bright youngsters hanging around, asking questions, disputing your answers . . ."

Mr. Clifton presents his protagonist, a Junior E, with the enigma of a colony on the planet Ceti II which has apparently disappeared, most abruptly and inexplicably. The reason for the disappearance, as E Gray discovers toward the end of the novel is a fascinating metaphysical idea. So far, so good.

But Mr. Clifton has hung the body of his novel on a skeleton barely strong enough to support a short story. The flesh is rich, but there aren't enough bones. His quiet restraint and slow pacing only emphasize the fact that he has failed to buckle down and work out a story with enough action, character, and conflict to fill a novel.

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However, this is Mr. Clifton's first book written without a collaborator, and perhaps he needs time and experience to find his own way. He's too good a writer to make the same mistake twice. So let's give him an E for effort, and wait for his next.

It's been suggested that most women fail to write significantly because the female mind is viscerotonic, and occupied almost exclusively with the moment-to-moment reality of emotions. If this is true, literature's loss is science fiction's gain, for OUT OF BOUNDS, Judith Merril's collection of short stories, is a warm and colorful rendering of the minutiae of the future.

In seven stories she deals superbly with material that most men ignore: the strain of a pregnant woman worrying whether her child will be a monstrous mutation ("That Only A Mother"); the timid meeting of two telepaths who doubt the reality of their powers ("Connection Completed"); the travail of the wife of a pioneer spaceman ("Dead Center"); a love affair with a ghost ("Death Cannot Wither").

Let the men write about the Big Decisions, if they're so equipped; we still need more of Miss Merril's art to keep reminding us that fantasy and science fiction must be based on human values.

Although *Fantasy & Science Fiction* (the magazine, not the field) has inherited the mantle of the fabulous *Unknown,* we all have a warm spot in our hearts for that great trail-breaker, and welcome each re-print from its pages. Latest is THE INCOMPLETE ENCHANTER by L. Sprague de Camp and Fletcher Pratt.

The authors waste no time getting down to their fantastick business. They hocus-pocus Harold Shea, a XXth century psychologist, back to the para-worlds of Norse mythology and Spenser's FAERY QUEEN, and involve him in adventures that follow the pattern of THE CONNECTICUT YANKEE. They lean heavily on anachronistic dialogue for laughs, but the book holds up amazingly well after twenty years.

One final note: since this department earns its living as a professional writer, it is, quite naturally, pro-writer. If any author would like to send in a letter about his new book, discussing the technical problems to enable this department to understand it better for review, please feel free. We are on the side of the angels.

—ALFRED BESTER

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A distinguished mystery-writing collaboration here offers an account which many of you may find unlikely—it is presented however in the confident belief that some of you will find in it both reassurance and comfort. . . .

HOW LUCKY WE MET

by Wade Miller

IT WAS ONE OF THOSE EVENINGS that he had to think about himself. He had to get out of the house and be alone yet not be alone. How can you run with the pack when there is no pack? His name was Ralph MacIntire and he had settled for the dimmest deadend corner of the neighborhood bar, apart from all the strangers but still among them. He wasn't a drinking man, although that had occurred to him as the modern first-to-mind answer to his misery.

In the jangle and chatter of the strangers, he sat aloof. People kept playing the jukebox and often it emitted the highpitched siren sounds that keenly hurt his ears but didn't seem to affect the laughing others. He had ordered a bourbon in milk and a rare beef sandwich. The drink he had scarcely touched, but in that revolting mixture was the only way he could down whisky at all any more. The milk cloaked the odor. As for the sandwich, he had done much better by it, although leaving the bread mostly untouched.

He raised his head sharply, his nostrils flaring in the smoky air. He couldn't believe his senses at first, although he had come to trust them. There was someone else here, an odd someone else, like himself. He began to breathe harder through his open mouth as he peered about through his heavy spectacles.

He sighted her finally. She too wore glasses that she had barely pulled out of her purse. Tawny head tilted back, she was staring directly at him through the crowd, suspicious but rigid with anticipation.

To Ralph MacIntire it was a miracle, worth treasuring and crying over. For the first time in the past year, he didn't care what kind

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of trouble he got himself into. He had never expected to locate, never even considered the possibility of, a woman like this. He seized his plate in one hand, his drink in the other, and jostled his way toward the booth where she sat alone, as alone as himself. She was a well-dressed matron in her thirties, full-bosomed, trimly girdled, her cheeks alive with the pretty red of embarrassment as she watched his approach.

Another unattached male was also heading toward the prize. Ralph bodied against him roughly, said low in his throat, "Get out of my way." The other man glanced at him arrogantly, then mumbled something and melted back into the crowd.

Ralph squinted down at her. "Please may I join you?" He introduced himself in the same plaintive tone of voice.

The woman's voice was thrillingly husky. "Of course. I think this is simply wonderful. But I'm not as surprised as you, am I?" She told him her name, Mrs. Something Waring. "My nickname is Princess. Do you understand about the nicknames?"

He didn't. He slid into the booth close to her until their flanks touched. His leg trembled badly.

She said, "Calm down. Don't derange yourself, as the French say. Everything is going to be all right."

Thank God," he muttered. "You see, I never expected this."

"It's not so bad, believe me. There's you and there's I and there's more besides. Certainly, we're different, but so what? In some places that's a sin, in other places it's a crime—being different, I mean—but we'll make out."

"Do we—I mean, have you ever hurt anybody?"

"Heavens, no. You see, we have judgment—on top of all the rest of it. There's nothing vicious involved; this isn't like the old superstitions. Only the differentness."

"Thank God," he said again.

She pressed her hand over his, then squinted more closely at his fingernails. "Oh, Ralph—you've been digging, haven't you?"

He told her about late last night, after his wife was asleep, going out into the backyard. "Nobody saw." He added lamely, "We have gophers, quite badly right now."

To his relief, she chuckled. "I've caught a couple of stray cats myself. Actually, they were little more than kittens. I didn't eat them, understand, or even taste them. I put the horrid little things down the garbage disposal. But there was the appeal of hunting."

"Yes." Holding hands, they gazed out at the rest of the people, dancing, drinking, joking. "It gets on my nerves, the confusion of spoors. Thousands of them criss-crossing, everywhere I go."

"You'll get used to it gradually."

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"The worst thing was last week. At the office, I was standing by the water cooler. One of the other fellows bumped into me, passing by. It surprised me and before I could think, get under control, I swung around and bit him in the shoulder."

"Badly?"

"No." He laughed shakily. "I'm not at all in practice—Princess. I had to pretend I'd slipped and fallen against him with my mouth open."

"Let me see your teeth," she demanded. He bared them for her. She traced her finger across them, frowning. Then she riffled around in her purse until she found a business card. "They'll have to come out, of course. Definitely growing—I mean the two at the upper corners of your mouth. This fellow will do it for you and you'll never hear another word about it. I had to have it done, too." She smiled broadly to show him. "Neat? Simply a nice little two-tooth bridge. I was worried sick at first. I wanted so much to stay pretty."

"I'm still worried sick. A whole year of this—all alone. I didn't even dare tell my doctor much. I was afraid of being put away somewhere."

"Caged up? Stay away from the zoo, Ralph. That's one place sure to give you a really sick feeling." She squeezed his arm consolingly. "Doctors can't help—it's a matter of personal adjustment, acceptance."

"But how long has it been going on?"

"Historically—who knows? Our group has been trying to work out a theory, but you know how many crackpots populate any given group. There's the Cerberus faction and the Anubis faction and the bunch that stands foursquare behind Caleb in the Bible. Me—I don't much care as long as I function. And I've seen very few jobs performed by humans that can't be done just as well by animals."

Ralph flinched. He wasn't ready for the distinction.

"I'm sorry," she said softly.

"Don't be. Just finding you is the biggest reassurance I've ever gotten in my life." They rubbed shoulders affectionately. He said, "It's been one hell of a year."

"Only a year? You poor darling. I've lived with it for four years now. Oh, there are terrible problems. You have to bathe so much oftener and pay attention to insecticides—*you* know. My God, I thought I'd shrivel up and die the day I found my first flea. But when you get to paying attention, why, there are lots of fine mange medicines on the market, and vermifuges . . . and be on a very sharp lookout against conjunctivitis."

He took off his glasses and rubbed his eyes. "That was the

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first symptom, when my eyesight began blurring on me. Then I began to be so conscious of odors—and the difference in my hearing. The slightest sound, and I'd wake up in the night and I could feel my ears actually move. What brought it on?"

"We don't know. In my case, it happened right after I had my first litter. I mean my children. I had triplets. That was when the sounds began bothering me, the highpitched sounds, like my husband's whistling. The eye thing, too. Watching TV, I discovered I couldn't meet anybody's eyes for long. The salesmen or the singers would stare out at me—me and a million other people—and I couldn't stare back. I had to look away. That was the strangest thing."

He snorted. "I've given up trying to nominate one single strangest thing. Last week . . ." He hesitated, peering at her undecidedly, nostrils working.

"Oh, that!" She grinned, letting her tongue hang out a little. "I've heard that tale before. Regarding your married life. Your wife called you disgusting, right?"

He nodded. "Not that I don't love her, you understand. But to be told at two o'clock in the morning that—"

"Spare me the details, Ralph, my pet. Pity my poor husband. Sometimes it makes me want to cry. For nearly six months of the year I'm as frigid as a penguin's left foot, then for a week or so I'm more than ten men could handle. Then another six months . . . Oh, the poor guy. People like you and me have got to control ourselves on the one hand and pretend on the other. That's the only way to get along." She gazed gloomily into her glass. "I wish I could stand the smell of this stuff. I'm well-adjusted, according to me, but I'd still like to get spectacularly drunk. I'm tired too of having him wake me up in the night and tell me I've been running with my feet—and making funny noises. He means snarling, I know. I hate curling around, making a nest for myself, every time I go to bed. I don't mean to rob him of the blanket."

Ralph gazed at her in delight. "You, too! What would I have done if I hadn't smelled you out here tonight? Do you ever have that overpowering urge to crawl into somebody's lap and cuddle and feel safe? Do you ever want to sprawl out in the sun and think of nothing? Princess?"

She worked up a smile for him. How much prettier it would have been had her side teeth been longer. "All that, Ralph. Like why I took a night job on the switchboard in that office building down the street. I can't abide the sight of the moon. I wouldn't want to give myself away. Have you had your distemper shots?"

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He shook his head. He could feel the hair on the back of his neck stand up in fear and anxiety. "Must I?"

"You bet. It's especially bad in fall and winter. And fright disease—but no one even knows what causes that, so I shouldn't have mentioned it."

"Well, if haven't been frightened enough before tonight . . ."

Princess smiled. He decided she had the longest and loveliest tongue he'd ever seen. "I'd might as well get you prepared for the other things. I imagine you already have yourself disciplined in regard to lavatory difficulties. That's the first problem we come up against. But you mustn't be shocked when you begin to lose the little toe on each foot. It's painless, more or less absorbed, and no one need know. And sooner or later you're bound to have ten more teeth come in."

He licked around the inside of his mouth. His rear gums had seemed tender lately.

Princess indicated the lower back of her dress. "And this."

"I'd been wondering about that," he confessed.

"The simplest answer is to have it excised. You know, bobbed. Fittings are awfully difficult, otherwise, and the thing serves no useful purpose. How much do you have so far, by the way?"

"Only about an inch."

"You'll have an easy time. Use the card I gave you—the same doctor will fix you up. Though it is a pity that we have to do such things. I really think they're kind of cute."

Ralph clasped her hands warmly. "What would I have done without you, Princess?"

She nuzzled his neck. "Sniffed out somebody else, I've no doubt. We're so indiscriminate." She raised her head alertly. "You understand that I still love my husband. I've never been crazier about any fellow but him, the poor guy."

"I feel the same way about my wife."

"In that case." She nestled against him. "Don't you despise those slanders, though? The manger story. The one about returning to your vomit?"

"We'll have our day." He gazed intently at the smoothness of her cheek and throat. "I've got to admit I've worried about the possibility of—well, fur. I've been watching the sides of my hands very closely."

"We seem to be what they call at the bench shows a hairless variety. You phone me tomorrow. I'll tell you where we meet. Once a week, the few of us get together to talk out our problems and have a good romp. We're even considering organizing some field trials —but that's still in the planning stage. Think how proud I'll be to announce I've smelled out a new

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member. . . . I've really got to get on my way to work now."

"You can spare a few minutes more."

"Not even a few minutes." She took her mirror out of her purse and inspected her face. "Oh, how glad I am I had those teeth out. They made me look like—did I tell you how much I detest the word they have for the female of the species? The naughty word?"

"I don't blame you."

"Well now, you stay housebroken and call me the first chance you get. You and I can get together and I'll introduce you to the rest of us. And you'll be able to get your nickname." She studied his yearning expression. "Rex. You give me a Rex feeling. Would you like that?"

"Very much." He whispered the name to himself.

"I suppose you'd like to kiss me goodnight."

He wanted nothing more. They put their faces together and he thrilled to discover how pleasantly cold her nose was. After making certain no one was looking, they lapped each other's cheeks briefly.

As Princess rose to leave the booth, Ralph rose, too. He watched her out the door, so happy when she flashed her even-toothed smile back at him. He sat down again and finished off the nearly raw meat in both their sandwiches. He found he was panting but not so audibly that the others could hear.

He left the bar himself soon after, heading home. Rex. He rolled the new name around in his mouth. As soon as he got out from under the sterile light of the neon sign, around the corner into the dark of the parking lot where he'd left his car, unobserved by a soul but never again to be absolutely alone ever, in his newfound delight he wagged his rump happily.

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A new story from one of the most creatively imaginative talents now active in the science fiction field. This one is a further adventure of John Carmody, the only man who ever gave the famous detective Leopardi the slip, and now a lay brother of the order of Saint Jairus. Brer John has uncommon memories and skills for a lay brother, which may, or may not, be of assistance to him when he is ordered to the far-off planet of Wildenwooly.

A FEW MILES

by Philip José Farmer

BRER JOHN CARMODY WAS bent over, pulling out the carrots from the garden soil, when he heard his name called.

He straightened up, saying "Ough!" as he did so and putting the palm of his hand to his aching back. He waited for Brer Francis because Brer Francis had not told him to come but had merely named him.

Brer John was a short heavily built man with a square face, one drooping eyelid and a shock of blueblack hair that bristled like porcupine quills. Lay brothers of the order of St. Jairus, to which he belonged, did not shave their heads. He wore an ankle-length robe of maroon fiberglass and maroon plastic sandals. A broad plastleather belt circled his bulging stomach, and from it hung a cross and a small maroon book.

Brer Francis, a tall thin man with a narrow face and a ski-slope nose, halted before the fat man. He pointed at the bunch of carrots in the fat man's hand and said, "What happened to those, Brer?"

"Rabbits," said Brer John. He looked upwards and gestured furiously, though it was evident by his half-grin that his anger was mock.

"Rabbits! How do you explain that, heh? We live in cities that are completely roofed over and walled, and the walls go deep into the ground. Yet rabbits and mice and rats manage to get under the walls and raid our gardens and pantries. And squirrels

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somehow climb into our trees, and birds, who must squeeze themselves through the interstices of the molecules of the roof, nest on every tree. And insects, who don't know how to burrow, only to fly or hop, are here at hand."

He swatted at a fly and said, "And on my nose, too. That pesky creature of Satan has been tickling my bulbous proboscis for the last past hour. However, I have refused to kill it on the grounds that it might have been sent to tempt me to anger and violence. And it has nearly succeeded, too, I might add."

"Brer John, you talk too much," said Brer Francis. "Far too much. However, I did not come here to reprimand you for that . . ."

"Though you have stayed to do so," said Brer John; and then, quickly, before Brer Francis, reddening face exploded into words, "Forgive me for that last remark. And the previous ones, too. As you said, I talk too much. It is a very grave fault, or, if not a fault, at least a characteristic to be frowned upon, and . . ."

"Brer John!" said Brer Francis. "Will you keep quiet long enough to allow me to tell you why I am here? I did not come out here to satisfy my curiosity, you know."

"Forgive me," said Brer John. "I'm all ears."

"The bishop wishes to see you. At once," said Brer Francis very quickly as if he were afraid Brer John would interrupt if he breathed between words.

Brer John turned and threw the rabbit-damaged carrots into a cart and the good carrots into another. Then he set off towards the main building, a long low structure of pressed earth-blocks painted a dark maroon. Its high-pitched roof was raised several feet above the walls by thin poles, and a grillework of maroon metal filled the space between roof and wall. The entrances had no doors, for it was the tradition of the order never to have a locked door, and here in the controlled environment of the enclosed city, it was not necessary to keep out the weather. The roof was there only to give privacy from people flying overhead.

Brer John entered the main building and, without bothering to clean his dirty hands and face, went straight to the office of the Father Superior. When the chief called, no man loitered.

The rooms within the building did have doors, though they were unlocked. As the door to the Father Superior's office was closed, Brer John knocked.

"Come in!" said a voice within, and Brer John, not for the first time since he had joined the order as a lay brother, entered the large triangular room. He stood at the base of the triangle, and the Father Superior sat behind a large translucent desk at the apex of

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the triangle. The top of the desk was loaded with piles of tapes, a stenowriter, and a vuephone. The Father Superior, however, was not dwarfed by the mountainous mass before him; he was a very tall man.

He was broad-faced with long rusty-red hair and a full rusty-red beard, which he and only he in the "inn" was entitled to wear. He was puffing on a huge Havana cigar.

Brer John, who had given up smoking for a month as a penance for one of his several sins, sniffed hungrily at the green smoke roiling around him.

The Father Superior flicked off the toggle of the stenowriter into which he had been dictating.

"Good morning, Brer John," he said. He waved a cartridge at the fat man.

"I have here an order which just came in via spaceship. You are to go to the planet of Wildenwooly at once and report to the Bishop of Breakneck. We will miss you in more ways than one, but we love you. God speed you, and our blessing."

Brer John's blue eyes widened. He did not move, and for the first time in a long time he could not talk.

The Father Superior, however, had closed his eyes and leaned back on his tiling chair while he dictated out of one corner of his mouth and puffed cigar smoke out of the other. It was evident that he considered that he had given all orders necessary.

For a moment Brer John stared at the long ash on the end of the Father Superior's cigar. Obviously, the ash was just about to fall, and he wondered if it would fall on the long red beard beneath it.

However, the Father Superior, without opening his eyes, removed the cigar and flicked the ashes onto the stone floor.

Brer John shrugged and left the room, but the wonder was still on his face.

Outside the room, he hesitated for a few minutes. Then, sighing, he walked outside and crossed the garden to Brer Francis.

"Brer Francis, may I speak?"

"Yes," said the thin man. "If you confine yourself to the matter at hand and do not take the opportunity to run off at the tongue as usual."

"Where is Wildenwooly?" said Brer John with a tone that bordered on the pathetic.

"Wildenwooly? It is, I believe, the fourth planet of Tau Caesari. Our order has a church and an inn there," he said.

Brer John did not think that the order had a tavern on the planet. The dwellings of the order were customarily called inns because they had been so designated by the founder, St. Jairus.

"Why do you ask?" continued Brer Francis.

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"I have just been ordered to go to Wildenwooly by the Father Superior." He looked hopefully at the other man.

But Brer Francis merely said, "Then you must go at once. God speed you, Brer John. Go with my love. I may have reprimanded you many times, but it has been for your good."

"I thank you for your love," said Brer John. "But I am at a loss."

"Why?"

"Why? To whom do I go to get a ticket for berth on a spaceship? Who gives me a draft on the order for travel expenses? What about a letter of introduction to the Bishop at Breakneck? I don't even know his name. I don't even know when a spaceship might leave for Wildenwooly or how long I might have to wait for it or where to wait for it. I don't even know where the spaceport is!"

"You talk too much," said Brer Francis. "You have been given all the orders you will get. Or need. As for the spaceport, it's only a few miles outside the city. And the inn on Wildenwooly is only a few miles outside the city of Breakneck. With good luck you might be there by this afternoon."

"That's all you have to say?" said Brer John unbelievingly.

"Only a few miles," repeated Brer Francis. "You must leave at once. Orders, you know."

Brer John looked hard at Brer Francis. Was he imagining or was a grin about to break out on that long lean rarely smiling face? No, he must be mistaken. The face was grim and unmoving.

"Don't be distressed," said Brer Francis. "I was once given just such an order. And so have others."

Brer John's eyes narrowed. "This is a test of some sort?"

"The order wouldn't send you forty thousand light years away *just* to test you," said Brer Francis. "You are wanted and needed at Wildenwooly. So go."

Brer John Carmody seldom hesitated. Once he had decided upon a course, and it did not customarily take him long to decide, he acted. Now he walked swiftly to the communal shower, entered the room, removed his robe, revealing a white body and legs painted black to the groin. He inserted the robe into a rectangular hole in the wall, and then he entered the shower. He did not stay long, for though the order had installed an entirely automatic shower, it had insisted that only cold water would be provided for the discomfort of its members. Once a month the order was treated to a warm shower.

He stepped out, shivering, and dried off in a blast of air, also cold, which blew from vents in the wall. Then he took out his robe from a receptacle below the one in which he had inserted the

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robe and put it on. And he gave a short thanksgiving that the order had at least installed a cleaning apparatus. When he got to the frontier planet of Wildenwooly, he would have to wash his clothes by hand. And probably, considering his humble position, the robes of the other members, too.

Putting on his robe, he went to his cell. This was a room, six feet by seven feet, with luminescent walls, a crucifix attached to the wall, a hammock which was rolled into a bag during the day, a desk which folded down from the wall, and a niche in the wall where he kept all his worldly possessions. These, a missal, a history of the Church from 1 A.D. to 2260 A.D., a Latin grammar, and a Life of Saint Jairus, he put into the sack formed by the hood hanging down over his shoulders. Then he got down onto his knees before the crucifix, said, "Lord and Master, let me know what I am doing. Amen," rose and walked to the door of his cell. Just before leaving, and without breaking his stride, he reached out and took a long shepherd's staff from its peg on the wall. All lay brothers were required to take that crook with them when they went into the outside world, if the encapsulated city of Fourth of July could be called the outside world.

It was past noon, and the Arizona summer sun was sliding downhill. Brer John found the temperature only a little warmer than inside the inn. The plastic roof over the city was, at this time of the day, opaqued enough to reflect most of the rays. Even so, Brer John looked forward to getting outside the walls, even if it meant being immersed in the staggering heat of midsummer Arizona. He had long felt cooped up, and, though he had never openly complained, he had felt the urge to do so. And had accordingly confessed and made his penance.

For a moment he paused. He knew there was a spaceport near Fourth of July, but he had no idea in which direction. So he went to a cop.

The cop was one of the new types, a Mark LIV. Its face and body were made of a tantalum alloy, but the eyes were of protoplasm, copied from those of some long-dead corpse and grown in the laboratory. And it had a semi-independent action, for the brain in its metallic belly was not a mechanism controlled remotely from headquarters below the ground. Its brain was a grey protoplasmic shape like a man's, twice as large and half as intelligent. It could not carry on a decent conversation, much less an indecent one, but it could handle its job quite well, and it could not be bribed or influenced. And, unlike its predecessors, it got

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around on legs instead of wheels. Its feet were flat.

Brer John looked at the name on its chest, and then said, "Officer O'Malley, where is the spaceport?"

"What spaceport?" replied the cop. The voice was loud and toneless and sent shivers down Brer John's spine. It was like talking with a man deprived of his soul.

"Ah, yes, I forgot," said Brer John. "It's been so long since I talked to a cop. And they were usually shooting at me. I must ask direct questions, *n'est-ce pas?*"

"*N'est-ce pas?*" echoed the cop. "What language do you speak? I will refer you to Headquarters," and the cop reached with a huge grey-scaled hand for the microphone attached to the side of its head.

"I speak American," said Brer John hastily. "I wish to know how to get to the Fourth of July Spaceport from here."

"Are you going by tubeway or private car?" said the cop.

Brer John put his hand into the huge pockets of his robe and then withdrew them, empty. "Shank's mare," he said sadly.

"You told me you spoke American," said the cop. "Please speak American."

"I mean, I am going to the spaceport on foot," said Brer John. "I am walking."

The cop stood silent for a moment. Its face was expressionless as metal, but Brer John, who had a vivid imagination, thought he saw puzzlement film the features and then flit away.

"I can't tell you how to get there if you walk," said the cop. "Just a moment. I'll refer you to Headquarters."

"That won't be necessary," said Brer John hastily. He could visualize himself going into a lengthy explanation to Headquarters just why he was *walking* to a city exit from this distant point. And perhaps being delayed to wait while a human cop was sent to investigate him on the spot.

"I can follow the tubeway to its end," he said. He pointed to a line of tall metal rods, each of which was surmounted by an enormous loop of metal.

"Which way do I go to the exit closest to the spaceport? Fourth of July," he added.

The cop was silent for two seconds. Then it said, "You don't mean on the date of the Fourth of July? You mean the spaceport called Fourth of July, right?"

"Right," said Brer John.

The cop pointed to the closest tubeway. "Take a North car on Number Ten Tubeway. Get off at the exit to the city. Go outside the city. Take a taxi from there to the spaceport of Fourth of July."

"Thank you," said Brer John.

"You're welcome to the services of the city," said the cop.

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Brer John hurried away. The living eyes in the dead face made him uncomfortable. But he could not help wondering if the cop was truly incorruptible. Ah, if it had been the old John Carmody talking to the cop, then things might have been different! Not a humble lay brother of St. Jairus asking directions, but the cleverest crook in the cosmos trying to see if finally here was a cop who couldn't be bribed, tricked or coerced.

"John Carmody," said Brer John to himself, "you're a long way from being pure in thought. And you've just added another penance to suffer. God preserve you! You've barely left the cloister, just ventured into the outside world, and already you're thinking of the old days as the good old days. Yet you were a monster, John Carmody, a hideous monster who should have been obliterated. Not at all the lovable rogue you were picturing yourself as."

He walked below the tubeway. Overhead, a bus shot through the loops at the ends of the poles, then paused a hundred yards ahead of him and sank down to the ground to discharge its passengers. He wished he had a decicredit, vulgarly called "dessy," as fare. One decicredit would take him to the city exit and spare him the ten miles of shank's mare he had ahead of him.

He sighed, and said, "John, if wishes were horses . . ." and then he chuckled, visioning himself on a horse in this city. What a panic that would create! People running to stare at this monster seen now only on tridi or in the zoo! People running away in fright, the cops being called, and he . . . hauled off to jail. And guilty not only of secular crime but of ecclesiastical. A humble lay brother anything but humble, prancing pridefully on a horse, or was it a horse that pranced? Guilty of public display, inciting to riot and God knew what else.

He sighed again and began walking. Fortunately, he thought, a man was able to walk from one end of the city to the other if he followed the narrow path created by the poles of the tubeway. Unlike the old days, when there had been streets for a man to walk on, the city was one maze of narrow yards with high fences and a single family room in the middle of each strip of fence and grass, the main quarters being underground. And underneath the houses, the factory or offices where the house dwellers earned their living. If you could call it living.

He walked and walked, while overhead the citizens traveled in the tubeway bus or flew in their private cars (rented to them by the clutch to which they belonged). Once a robin flew over

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him, and Brer John said, "Ah, John, if you believed in the pernicious doctrine of transmigration, you would wish to enter the cycle of karma again as a bird. But of course, you don't, so why sigh for the ecstasy of wings? It is your aching feet that make you think these dangerous thoughts. Go, John, go! Plod on like the weary ass that you are."

He walked for perhaps two more miles and then to his delight he saw a park open up before him. It was one of the two large parks afforded by the city, where the citizens flocked to get a facsimile of the outdoors world. Here were winding dirt paths and rocks heaped up to resemble small mountains and caves in the mountains and trees and birds and squirrels and lakes on which swans and geese and ducks swam and every now and then a fish leaped up from beneath the surface.

It was, compared to the geometric jungle from which he had just come, a paradise. Alas! this paradise had no snakes, but it had too many Adams and Eves. They swarmed everywhere with their little Abels and Cains, lolling, drinking, eating, shouting, running, screaming, bellowing, lovemaking, quarreling, laughing, scowling.

Appalled, Brer John halted. He had been shut up so long inside the walls of Our Lady of Fourth of July that he had forgotten the manswarm.

He paused, and at the same time he heard a sound that shut up the uproar. A fire siren whooping in the distance.

He turned and saw the smoke pouring from an eathouse on the edge of the park. And overhead, shooting through the air, the red needle shape of a fire engine.

Brer John ran towards the eathouse. It was one of the few aboveground dining places in the city, a building constructed to resemble an Early American loghouse. Here the picknickers could go to eat in "atmosphere" and get away from the vast and dismally clean and bright cafeterias of the clutches where they habitually ate.

The owner of the YE OLDE ARIZONA LOGHAUS stood in the doorway and barred Brer John's entrance.

"No looting!" he shouted. "I'll kill the first man that tries to come in!" He held in his big meaty hands a butcher's cleaver.

Brer John halted and said, between gasps, "I've no wish to loot, my friend. I ran to see if I could help."

"No help needed," said the owner, still holding his cleaver poised. "I had a fire a couple years ago, and the mob broke in and stole everything before the cops could get here. I'll have no more of that."

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Brer John felt himself pushed from behind. He looked over his shoulder and saw that he was being urged forward by the pressure of many men and women behind him. Obviously, they wanted to burst in and steal everything they could lay their hands on and wreck the eathouse before the police arrived. It was the custom when anything broke down in the city, an expression of the resentment they felt at their hemmed-in lives and at the non-human representatives of the authorities.

The owner stepped back inside the doorway and shouted, "So help me, I'll split the skull of the first man or woman who tries to get in!"

The mob yelled with fury, and it snarled at him for having the effrontery to spoil their sport. It thrust forth a pseudopod of force, and Brer John found himself, willy-nilly, the vanguard and vicar of violence.

Luckily, at that moment, the shadow of the fire engine fell on the crowd, and the next moment a spray of foam drenched them. They fell back, panting, the oxygen suddenly cut from around their noses and mouths. Brer John himself almost strangled before he could fight his way out of the foam that roiled hipdeep around him.

Immediately afterwards, the copcars, sirens screaming, slid down out of the sky. And the cops poured out of the cars, light gleaming from the metal rings of their legs and round metal chests and the living black eyes, wet in the dead metal faces, moving back and forth. Their voices roared above the crowd's, and in a short time they had returned order to the park. The firemen walked into the eathouse, and in ten minutes came out. Most of them took off in their fire engines; one company stayed behind to clean up the foam. A lone cop recorded a report from the owner, and then he, too, left.

The owner was a short dark beefy man of about fifty. He had a thick black walrus moustache, through which he cursed fluently and loudly in American, Lingo, and Mexican for five minutes. Then he began locking the doors of the eathouse.

Bren John, one of the few people who had remained to watch, said, "Why are you closing? Hasn't the place been cleaned up?"

He was not really worried about *why;* he hoped that somehow he would be able to get a meal from the man. His stomach had been growling like a starving dog for half an hour.

"Oh, it's clean enough," said the man. "But the autochef is out of order. It started smoking; that's why I called the firemen."

"Can't you have it repaired?" said Brer John.

"Not until I sign a new contract with the Electrical Mainte-

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nance Union," growled the man. "And that I won't do. They're on strike now for higher wages. Well, I don't give a damn. I'll go out of business before I deal with them. Or wait until my brother Juan gets here from Mexico. He's an electronics tech; he's going into business with me, and he can keep the autochef going. But he won't get here until next week. When he does, we'll show the bastards."

"It just so happens," said Brer John, grinning, his mouth watering at the thought of all the goodies within, "that I am an electronics expert, among other things. I could repair the chef for you."

The man looked at him from under thick brows. "And just what's in it for you?"

"A good meal," said Brer John. "And enough busfare and taxi fare to get me to the spaceport."

The man looked around, then said, "Ain't you worried about the union? They'll be down on us like a bus whose antigrav has given out."

Brer John hesitated. The growling of his belly was loud. He said, "I don't wish to be called a scab. But if it is true that your brother is going to fix it anyway, then I see no harm in repairing the machinery a few days before he gets here. Besides, I'm hungry."

"O.K." said the owner. "It's your funeral. But I oughta warn you that there's a picket stationed in the kitchen."

"Will he resort to violence?" asked Brer John.

The owner took the cigar out of his mouth and stared at the brother. Then he said, "Where you been all your life?"

"I was gone from Earth quite a few years," said Brer John. "And my life here on Earth has been quite cloistered since my return."

He did not think it necessary to add that the first year had been spent at John Hopkins, where he had been undergoing rehabilitation therapy after surrendering himself to the police.

The owner shrugged and led Brer John through the dining rooms into the kitchen. There he pointed at a large painting hanging from the wall, Trudeau's *Morning On Antares II*. "Looks like a picture," he said. "It's the picket. A TV receiver. The union monitors it from its headquarters. Once they see you working on the chef, they'll be down on us like the wolf on the fooled."

"I don't wish to suggest anything illegal or unethical," said Brer John. "But what would happen if we—I—turned off the picket's power?"

"You can't turn it off unless you was to smash it," said the owner gloomily. "The power switch is remote-controlled by the union."

"What about hanging a sheet over it?" said Brer John.

"An alarm would go off at

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union headquarters," replied the owner. "And I'd be hauled off to jail by one of those stinking zombie cops. It's against the law for me to interfere with the vision of the picket in any way. I even have to keep the lights on in the kitchen day and night. And what's worse, I have to pay the light bill, not the ————ing union."

The use of the four-letter word did not bother Brer John. Such words had long ago ceased to be equated with vulgarity or immorality; it made no difference whether one used words of English or Latin origin in describing bodily functions or as expletives. Twenty-third century culture, however, did have other taboo words, and the owner could have offended Brer John by using them.

The brother asked for pliers, cutters, a screwdriver, and insulating tape. Then he stuck his head into the hole left by the removal of the wall-panels by the firemen. The ower began pacing back and forth, his big cigar puffing like signals sent by an Indian frantically asking for money from home.

"Maybe I shouldn't ought to of let you start doing this," he said. "The union'll have its goon squad on the way. Maybe they'll try to wreck the place. Maybe they'll start a lawsuit against me. It ain't as if you was my brother fixing that damn chef. They can't do nothing if the repairman is part-owner of the place."

Brer John wished he had insisted upon being fed before beginning work. His stomach rumbled louder than ever, and his intestines felt as if they had turned cannibal.

"Why not call a cop?" he said. "He can maintain order."

"I hate those metal-bellied zombies," said the owner. "So does any decent man. It's got so people won't call a cop unless they absolutely have to. People are beginning to take the law in their own hands 'cause they hate to deal with the cops. I'd rather have the joint wrecked and pay for it than ask them damn zombies for help."

"Impersonal uncorruptible law enforcement has always been an ideal," said Brer John. "So, now we have it . . ."

"Brer John, if you wasn't a man of the cloth, I'd tell you where to stick it," said the owner. "But you get the message. Say, tell me, how come you monks are called Brer instead of Brother?"

"Because that is the way our founder, St. Jairus, pronounced brother," said Brer John. "He was born on the planet of Hawaiki, where the Polynesian colonists developed their own brand of American. Ah, here's the trouble! Burned-out transformer in the high voltage power supply. Lucky for us the malfunction is so obvious. Maybe not so lucky unless we can replace the transformer. Do you have spare parts? Or do

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you, I suppose, depend upon the maintenance men to supply the parts?"

The owner grinned and said, "Usually I do. But my brother phoned me and said to lay in all the parts I'd need before the union caught on he was coming. You see, once they knew I was using him, the union'd fix it up with the suppliers in L.A. not to sell me any stuff. Oh, those bastards! One way or another, they'll turn off your switch!"

"Ah well, they must ensure their living, too," said Brer John. "There's something to be said for both sides in a labor-management dispute."

"The hell there is!" said the owner, clamping down on his cigar. "Besides, I ain't no management. I'm a proprietor who has to pay highway robbery prices to keep my electronic stuff going, that's what."

"Show me where you keep those parts," said Brer John.

He paused. A loud knocking had penetrated the kitchen from the front of the eathouse.

The owner scowled and said, "They're here. But they can't get in unless I unlock the doors. Or they bust 'em down."

He hurried into a room behind the kitchen. Brer John followed, and there he picked out the transformer he needed. When he came back into the kitchen, the knocking was louder and more furious.

"Do you intend to let them in?" asked Brer John.

"If I don't, they'll kick the door open," said the owner. "And I can't do a damn thing about it. According to the law, they got a perfect right to make sure nobody except the owner fixes up the electronic equipment. And they're trying to get a law passed to keep a man from doing that."

"Yes, it's true that a man has increasingly little liberty and rights," said Brer John. "On Earth, that is. That is why the individualist and nonconformist leave Earth in such great numbers for the frontier planets."

He paused, frowned as if he were thinking deeply, and said, "Perhaps that is why I am being sent to Wildenwooly." He sighed and added, "Though it looks as if I may not be getting there."

He turned to the open panel and said, "You keep them out as long as you can without resorting to violence. Perhaps, by the time they get here, I can have this repaired."

It did not take him long, for the transformer needed only to be clipped onto the circuit board and the terminals plugged in. He laughed. It was so simple that the owner, if he had taken the time to examine the situation, could easily have done the repair work himself. But he, like many, thought of electronics as being such a highly mysterious and complex science,

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that he needed an expert. Though there were many things that only a highly trained technician could troubleshoot, this was not one of them.

He withdrew the upper part of his body from the opening just in time to see the owner being pushed by four maintenance men into the kitchen. These were dressed in scarlet coveralls and electric-blue caps and wore their emblems on their chests and backs, a lightning streak crossed by a screwdriver.

On seeing Brer John they halted in astonishment; apparently they had not seen him on the picket but had been told to go to Ye Olde Arizona Loghaus and stop the scab.

Their leader, a six-foot-six man with the protruding brows and thick jaw of a pugilist, stepped forward. "I don't know what you're doing here, brother," he said. "But you better have a good reason."

Another man, shorter than the first but broader, said, "Perhaps the Father didn't know what he was doing?"

The big man whirled on the broad man. "He ain't no Father!" he snarled. "If you was one of our faith, you'd know that. He's a monk or a friar or a lay brother, something like that. But he ain't no priest!"

"I'm a lay brother of the Order of St. Jairus," said Brer John. "Brer John is the name."

"Well, Brer John," said the big man. "Maybe you've been shut up behind those walls so long meditating that you don't know that you're scabbing on us, taking the bread out of our mouths."

"I knew what I was doing," said Brer John. "By not fixing the autochef, I was taking the bread out of this man's mouth—," he pointed to the owner. "And I was also depriving many people of the chance to get away from those ghastly soulless clutch cafeterias."

"All this capitalist has to do is pay us what we want, and he can feed as many people as he can handle," snarled the big man.

"Well," said Brer John, "the trouble has been fixed."

The big man turned purple and clenched his fists.

"Shame on you," said Brer John. "You are ready to strike a man of your own faith, a member of a holy order, too. And yet that man—" he pointed to the broad man— "a man of another faith, if any, is ready to take a reasonable attitude."

"He's one of them damn Universal Light people," said the big man. "Always ready to consider the other fellow's side, even if it's to his own injury."

"Then the more shame to you," said Brer John.

"I didn't come here to be shamed!" roared the big man. "I come here to get rid of a sneaky little scab hiding behind a robe! More shame to you, I say!"

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"And just what do you propose to do?" said Brer John. He was shaking all over, not from fear of injury but from the fear that he might lose his self-control and attack the big man. And thus betray his own principles. Not to mention the principles of the order to which he belonged. What if they heard of this incident! What would they say, what action take?

"I propose first to throw you out," said the big man. "And then I propose to take out that transformer you put in."

"You can't do that!" bellowed the owner. "What's done is done!"

"Wait a minute," said Brer John to the owner. "No use getting upset. Let them take the transformer out. You can put it back in yourself, and there's not a thing they can do."

Again the big man purpled, and his eyes bulged out. "He will like hell!" he said. "If the picket sees him do anything like that, or even try to, we'll be down on him like the roof of the city fell in!"

"There ain't a thing you can do about it," said the owner, smiling smugly. "Go ahead. Take the transformer out. I'll just stand here and watch how you do it so's I'll know how to, too."

"He's right," said the broad man. "We can't do a thing if the trouble's that simple."

"Say, who's side you on?" roared the big man. "You a scab?"

"No. I just want to be legal," said the broad man. "Anyway, we can hire human pickets to picket the place."

"Are you out of your skull?" said the big man. "You know the Human Picket Union just upped their hourly rates, and we can't afford to hire any. And we don't have enough men of our own to spare for picketing. Besides, them damn pickets are pushing through a law to make it illegal for anybody except a picket union member to picket. The nerve of them guys!"

Brer John smiled and shook his head and tsk-tsked.

"I'm warning you!" shouted the big man, shaking his fist in the direction of the owner and Brer John. "If you re-repair the autochef, you won't have an eathouse to run!"

The owner, whose own face had been purpling, suddenly jumped on the big man and bowled him over. The two went down together, locked in furious, if not deadly, combat. Another of the goon squad took a poke at Brer John. Brer John ducked, and before he coud think, his reflexes took over. He threw up his left to block the fellow's punch, and seeing him wide open, slammed him in the belly with a hard right.

A fierce joy ran through him. Before he could recollect what he should be doing, he had done what he should not. Excellent student of karate, judo, sabate, *akrantu*,

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and *vispexwun*, and veteran of a hundred bar-room and back alley brawls, he went into action like a maddened lynx mother who thought her kittens were in danger. A chop of the palm-edge against a neck, a thrust of stiff fingers into a soft gut, a hard heel of a foot against a chin, a knee in the groin and an elbow in the throat, and all except the big man were out of the fight. Following the Biblical precept of saving the best for the last, Brer John incapacitated the big man by pulling him from the owner and working him over with palm, fingers, knee, foot, and elbow. The big man went down like a tree attacked by a thousand woodpeckers.

The owner struggled to his feet and was astonished to see Brer John on his knees, eyes closed, praying.

"What's the matter?" said the owner. "You hurt?"

"Not physically," said Brer John, getting to his feet. He did not believe in long prayers when they were informal. "I am hurt because I failed."

"Failed?" said the owner, looking around at the unconscious or groaning men. "Did one of them get away?"

"No," said Brer John. "Only it should be I who am on the floor, not they. I lost my temper, and also my self-respect. I should have let them do what they wanted to with me but never lifted a finger."

"————!" cried the owner. "Look at it this way. You saved these men from being murderers! Believe me, they'd have had to kill me before I would have let them mess up my autochef. No, you've done them, and me, a great service. Though I don't know what's going to happen once they go back to headquarters. There'll be hell to pay."

"There usually is," said Brer John. "What will you do?"

"Don't say that," said the owner. "The last time you asked that, we had a free-for-all. But I'll tell you what. I'm going to drag these goons out—and I could use some help from you—and then I'm going to lock the door, and then, much as I hate to have anything to do with those metal-bellies, I'm going to call the cops. They can station a flatfoot here and keep the goons from bombing or wrecking the place. I'll say that much for the zombies, they can't be scared by threats or influence."

Brer John began helping the owner carry the men out of the eathouse. They had, however, no sooner placed the four on the sidewalk and locked the door than they heard the siren of a police car.

"I have to go now," said Brer John. "I can't afford to have my name on the police records or in the papers. My superiors would frown on such unfavorable publicity. And it wouldn't do me any good either," he added, thinking

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of his pre-Christian days. It was possible that he might be taken back to John Hopkins for further observation.

"What will I tell the cops?" wailed the owner.

"Tell the truth," said Brer John. "Always tell the truth. I'm sorry I failed you so miserably. I have a lot to learn yet. And I'm still hungry," he said, but it was doubtful if the owner heard the last phrase, for Brer John was running in his shapeless maroon robe like a frightened bear for the shelter of a copse of trees in the park.

Once inside the grove, he stopped. Not because he had planned to, but because he ran across a picnic blanket and his feet slipped on a bowl of potato salad. He fell face forward in a plate of fish eggs. And lay there, half-stunned, vaguely aware of the howls and shrieks of laughter around him.

When he managed to sit up and look around, he saw that he was surrounded by six teenage boys and girls. Luckily for him, they were in a holiday mood. If they'd been in an ugly mood, they might have been able to harm or perhaps even to kill him. They were dressed in the uniform of the "skunks" as others called them and as they called themselves. These were black-and-white striped jumpers with close-fitting hoods, and their legs were painted with vertical black and white stripes. The eyes of the girls were ringed with black paint, and the eyes of the boys were painted with black semi-circles.

"Gimp the high priest!" screamed one of the boys. He pointed with red-painted fingernails. "Ain't him a dudu!"

"A real dong-dong," said one of the girls. She bent over Brer John and pulled a little string hanging from the side of her jumper. Her breasts leaped out of the low-cut bodice and stared at him with two red-pupilled blue-rimmed eyes. The rest howled and screamed and threw themselves gasping on the grass.

Brer John averted his eyes. He had heard of the trick the juvinquent girls liked to play; the false breasts which leaped out at the startled stranger like a jack-in-a-box. But he wasn't sure that these were false.

The girl stuffed the device back into her grotesquely out-thrust bosom. She smiled at Brer John, and he saw that she would have been a pretty girl if it hadn't been for the absurdly painted face. "What's ionizing, Willie?" she said to him.

Brer John rose, and, while he wiped his face with a handkerchief he took from his pocket, he said, "I am running from the cops."

He couldn't have said anything else that would have more quickly gained their sympathy.

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"Hophopping the deadpans? Ain't him a dudu? Don't him look some priest? Scratch one, him's some monk, nothing a priest, you short-cut to zero."

Home among my own, thought Brer John, and hot on the heels of that thought a fierce denial. No, they are not my own. My brothers and sisters, sons and daughters, sinners, too, but I am not home. I can understand them, how and why they are, but I will not be one of them. I will hurt no man with malice aforethought.

"Pink some me," said the girl who had popped out her bosom, false or otherwise. "Me'll straight you some hole." Brer John interpreted that to mean that he was to give her his hand and she would lead him to a hiding place.

"Me'll stick my nose along," said a youth who was distinguished from the others by his tallness and the closeness of his black eyes.

"Some poxy," said the girl, which seemed to mean that the boy was to come along. She led Brer John out of the grove and down a winding path and then through another grove where they stepped over couples in various degrees of passion, and then up over an artificial hill and under an artificial waterfall and into another collection of trees. Brer John looked overhead from time to time. A police car was still hanging in the air, but evidently they hadn't spotted him yet. Suddenly, the girl pulled him into a thick collection of bushes and sat down in the middle of them. The youth forced his body between the girl and Brer John and began drinking from the bucket of beer which he had brought along.

The girl handed Brer John a sandwich, and he devoured it. His stomach growled, and his mouth salivated. By the time he'd eaten it, the boy had put the bucket down, and the girl handed the bucket to Brer John. He drank it eagerly in great gulps. But the boy tore the bucket from his hands.

"Don't no road," he said, which freely translated meant, "Don't be a hog."

"Some you dudu," said the girl. "Frwhat you jet some?"

Brer John interpreted this to mean that she wanted to know from what he was running. He told them that he was a lay brother of the order of St. Jairus, one who had not yet taken his final vows. As a matter of fact, inside a week his year would be up, and if he then wished to quit the society, he could do so. He didn't even have to notify his superiors.

He did not tell them that he suspected that this order to go to Wildenwooly at the same time that his year was up had been authorized so he could make up his mind whether he wished to remain with the order of St. Jairus.

He told them that there was a possibility that he might go into

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the priesthood, but he wasn't sure that he wouldn't be happier by remaining a simple brother. He would get all the dirty menial tasks, true, but he also would not have the tremendous responsibilities that came with being a priest.

Also, though he did not say so, he did not want the humiliation of being refused permission to enter the priesthood. He was not sure that he was worthy.

There was silence except for the loud gulpings of the youth as he drank from the bucket. Brer John looked out through the bushes and saw that they were next to a fence. Just beyond the fence was a narrow strip of dirt and then a deep moat. On the other side of the moat was a large bare space of rock and, beyond it, a cave. Evidently this was the cage of some animal, and it had been prepared to resemble the natural habitat of the animal.

He looked for the animal but could not see it. Then, he saw a sign by the fence.

HOROWITZ
A fierce meat-eating giant bird of the planet Feral. Highly intelligent. Named after its discoverer, Alexander Horowitz. Please do not tease. This area monitored.

The girl reached out a hand and stroked Brer John's chin. "Some scratch," she said.

She turned to the youth and jerked her thumb in an invitation for him to leave.

"Whyn't some ionize?" she said.

He narrowed his eyes and said, "Me? Summun want rigor mortis?"

"Me never no monk-monk before," said the girl, and she laughed, while her blue eyes looked at Brer John with a look he knew too well.

The boy snarled, "Monk-monk?" and then Brer John understood that the girl was punning. Monk-monk, he remembered now, was an extremely vulgar word which had replaced one of the formerly tabooed four-letter words.

"Monk-monk the monk-monk," said the boy. "Me monk-monk summun if summun ain't getting the monk-monk off the pad."

He turned to Brer John. "Ionize, gutbutt!"

Suddenly, a knife was in the girl's hand, and the point was at the boy's throat. "Me seesaw rigor mortis," she said crooningly.

"Some?" said the boy amazedly, jerking his thumb at Brer John.

The girl nodded her head. "Me some. Never no monk-monk a monk-monking monk, comprendo? You ionize sooner than later. Some seesaw rigor mortis, no?"

The boy put his hands on the ground behind him and tried to back away from her. She followed him, the knife held to his throat.

As she did so, Brer John's hand

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flashed out and knocked the knife from her grasp. All three dived for it, and their heads came together. Brer John saw stars; by the time he'd recovered, the youth had grabbed him by the throat and was trying to strangle him. Brer John fought back; his stiff fingers plunged into the boy's stomach, the boy said, "Oof!" and released his hold. The girl, knife in hand, leaped at the boy. He turned and hit her on the jaw with his fist and knocked her unconscious to the ground. Then, before Brer John could move in close enough, the boy grabbed him by the front of the robe and lifted him high and helpless in the air. And the next Brer John knew, he was flying over the fence. He hit the ground hard, rolled over, felt the world slipping away beneath him, knew briefly that he was falling into the moat, fell backwards, and then . . . heard a voice shrieking, "Hey, John, hey, John! Here I am, John!"

He woke to hear the same voice calling, "Hey, John! Here I am!"

He was flat on his back, staring upwards past the grey walls of the moat and up at the roof of the city. The roof was no longer transparent, allowing the blue of the Arizona sky to come through undiminished. Night had fallen outside the roof, and now the roof itself was a glow bright as day, shining with energy stored during the day and released at sunset.

Brer John groaned and tried to sit up to see if he had any broken bones. But he could not move.

"Holy Mother!" he breathed. "I'm paralyzed! St. Jairus preserve me!"

But he was not totally paralyzed. He could move his legs and his arms. It was just that his chest felt as if it were crushed against the earth by a great weight.

He turned his head, and he almost fainted with fright. It was a weight that was holding him down. A huge bird . . .

It had been squatting by his side, its giant claw placed on his chest, pinning him to the ground. Now that it saw the man had his eyes open, it rose to one foot, still keeping the other placed on him.

"Hey, John!" it screamed. "Here I am, John!"

"So you are," said Brer John. "Would you mind letting me up?" But he did not expect anything, for it was obvious that the huge bird —if it was a bird—had a parrot's power to mimic.

Slowly, he moved his arms, not wishing to alarm the horowitz, for that must be what it was. It could have torn him open at any moment with its tremendous three-toed foot or with its moa-sized beak. Evidently it had leaped down into the moat after him, with what purpose, he didn't know.

His arms bent at the elbows, he lowered the upper parts to feel his chest. He had wondered what it

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was that lay on his chest, which was bare, probably because the big bird had ripped his robe open.

He felt sick. An egg lay on his chest.

It was a small egg, not much larger than a barnyard hen's. He couldn't imagine why a creature that large would lay such a small egg, why it would lay it on him. But it was and it had.

The horowitz, seeing the man's hands feel the egg, screamed with protest. Its huge beak stabbed down at his face. Brer John closed his eyes, and breathed in the rotten breath of the meat-eating creature. But the beak did not touch him, and after a moment he opened his eyes. The beak was poised a few inches above his face, ready to complete its descent if he harmed the egg.

Brer John gave a longer than usual prayer, then he tried to think of a way to get out of his predicament.

And could not. He dared not try to escape by force, and he could not, for one of the few times in his life, talk his way out. He did turn his head to look up at the edge of the moat from which he had fallen, supposing that some spectators would notice him. But there were none. And in a moment he realized why. The people who had been in the park probably had gone home to supper or to work, and the second shift at the clutches had not yet come into the park. And, of course, it was possible that nobody would come by for a long time. Nor did he dare to shout for fear of alarming the horowitz.

He was forced to lie motionless on his back and wait until the big bird left him. If it intended to leave him. It did not seem likely that it would. For some reason it had jumped into the moat to lay its egg on him. And it could not jump back out. Which meant that in time it would get hungry.

"Who would have thought that when I was told to go to Wildenwooly that I might perish in the city zoo only halfway out of the city. Strange and wondrous are the ways of the Lord," he muttered.

He lay, staring upwards at the glowing roof, at the huge beak and black red-rimmed eyes of the bird, and occasionally at the top of the moat, hoping for a passerby.

After a time he felt his chest tickling beneath the egg. The tickling grew stronger with every minute, and he had an insane desire to scratch, insane because to indulge would be to die.

"Holy Mother," he said, "if you are torturing me to make me think on my sins before I die, you are certainly succeeding. Or would be if I weren't so concerned with the tickling and itching itself. I can barely think of my most grievous faults because of the disturbing everlasting damnable itching. I have to scratch! I must!"

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But he did not dare. To do so would have been to commit suicide, and that, the unpardonable sin because it could not be regretted, was unthinkable. Or perhaps not unthinkable because he *was* thinking of it; what *was* the correct word—undoable? No, but it did not matter. If he could only scratch!

Presently, after what seemed hours but probaby was not more than fifteen minutes, the itching quit. Life again became endurable, even if not pleasant.

It was at that precise minute that the youth who had thrown him into the moat appeared above him.

"Grab time!" called the youth. "Me'll drop a rope!"

Brer John watched the boy tie one end of a rope to the fence and then throw the other end down into the moat. He wondered if the youth expected him to walk over and draw himself up, meanwhile blithely ignoring the huge bird. He wanted to call out and tell him he couldn't even sit up, but he was afraid his voice might alarm the creature.

However, he did not have to initiate any action. The second the rope touched the floor of the moat the horowitz released its hold on the man and ran to the rope. It seized it in its two small hands and, bracing its feet against the side of the moat, swarmed up.

Brer John jumped up and shouted, "Don't let it get out of the moat, son! It'll kill you!"

The youth stared at the creature coming swiftly up the rope. Just as the bird's head came over the edge of the moat, the youth came out of his paralysis. He stepped up to the bird and kicked savagely at the beaked head. The bird gave a cry, loosed its hold on the rope, and fell backwards. It struck the earth, rolled a few feet, and lay stunned, its eyes glazed.

Brer John did not hesistate. He ran to the rope and began hauling himself up hand over hand on it. Halfway up, he felt the rope straighten out beneath him. Looking down, he saw the horowitz had recovered and was following him up the rope. It began squawking furiously, intermingling its cries with screams of "Hey, John! Here I am, John!"

Brer John climbed a few feet higher, then hung there while he kicked at the crested head beneath him. His foot drove solidly into the creature's skull, and once again the bird lost its hold and fell backwards to the ground. Gasping for breath, it lay there long enough for Brer John to pull the rope out of its reach.

"We must notify the zoo personnel," he said. "Otherwise, the poor creature might starve to death. Besides, I have something that is the property of the zoo."

"Me don't scratch you," said the youth. Brer John interpreted

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this to mean that he didn't understand him. "Dum-dum some rigor mortised summum."

"The bird was only obeying the dictates of its nature," said Brer John. "Unlike you or me, it doesn't have free will."

"Will-swill," said the youth. "Gimp the baldun."

"You mean, look at the egg?" replied Brer John. He looked down to examine the strange situation of the egg. It had not fallen off his chest when he rose but had clung to his skin as if glued on. He pulled it away from his chest, and the skin stretched with it.

"Curioser and curioser," he said. "Perhaps the bird secretes an adhesive when it lays an egg. But why should it?"

Then he thought of his manners and his gratitude, and he said, "I thank you for coming to my rescue. Though I must admit I was surprised since—forgive me for mentioning it—you were the one who threw me down there."

"Goed out of me frying-pan," said the youth, meaning that he had lost his head. "Goed monk-monk gimping the trangle smack-smacking summun. Her's no monk-monking good. Gived her the ivory-doctor."

"Knocked her teeth out?" said Brer John.

"Scratch," said the youth. "Telled the trangle ionize. Daily dozen gived me cross-gimps."

"You told the girl to get lost because she was always getting you in trouble?"

"Scratch. Rigor mortis summun; me get sing-singed grey fat fried."

"You might kill someone and get sent to an institution where your personality would be changed? Possibly. However, your act in coming back shows you have promise. I wish I could repay you, but I have nothing to give you."

Suddenly, he began scratching furiously, and he added, "Except for these monk-monking lice that bird gave me. Is there anything I could do for you?"

The youth shrugged hopelessly. "Round-round. You going to Wildenwooly?"

Brer John nodded. The youth looked up at the glowing roof overhead.

"Bye-bye, maybe me go some there. Nothing but daily dozen in-and-out on The Antheap. Is a different dummy out in deep space."

"Yes, getting off Earth and on a frontier planet might make a new man of you," said Brer John. "And you might learn to speak American, too. Well, God bless you, my boy. I must go. And if you should get to Wildenwooly before I do, tell them I'm doing my best to get there. Holy Mary, it's only a few miles, said Brer Francis!"

He began walking away. Behind him rose a harsh wail of "Hey, John! Here I am, John! Your old buddy, John!"

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He shuddered and crossed himself and continued walking. But he could not forget the monster in the moat. The vermin that now swarmed under his robe and drove him almost frantic would not allow him to forget. Neither would the egg attached to his chest.

It was the combination of the two which decided him to find a secluded spot on the lagoon and bathe. He had hopes he could drown the bird-lice and unglue the adhesive which made the egg stick so tightly. Finding a place where he would not be seen was not, however, so easy. The first shift was streaming from the clutches into the park and was lying on the sandy beaches or swimming. Brer John did his best to avert his eyes from the naked as he passed through them. But it was impossible not to catch more than a glimpse of the women as they lay on the sand or ran before him. And, after a while, he quit trying. After all, he told himself, he had been accustomed all his life to seeing them all undressed at the beach and in his own home before he had gone into the order of St. Jairus. And all the fulminations of the Church had not been able to stop the faithful from following the custom any more than it had been able in the previous centuries to keep them from swimming in the abbreviated bathing suits. The Church had long ceased protesting against nude public bathing, but it still denounced the appearance of nudes in the streets. Though what its policy would be twenty years from now was unpredictable. Occasionally, a nude did venture on the street or in the markets and was arrested for indecent exposure, just as women in shorts or bathing suits outside of the beach had been arrested in the early part of—the Twentieth Century? The laity might go undressed in the public bathing places, but the clergy did not. In fact, they were forbidden even to be at such places. And he, Brer John, was disobeying the rules of his order, not to mention the Church as a whole, by being here.

But expediency sometimes dictated the breaking of rules, and the bird-lice biting madly into him demanded that he get rid of them at once before he made a spectacle of himself.

Brer John went halfway around the lagoon before he found what he was looking for. This was a high bank which was shielded from view by a group of bushes. He pushed through the foliage, and almost put his foot on a couple who must have thought they were alone in the Garden of Eden. He stepped over them and plunged on until he could not see them, though he was still distressed by the sounds.

Quickly, he slid his robe off and then let himself down the high bank of mud into the water. He

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shivered as the relatively cold water hit him, then after a moment he felt quite comfortable. Remembering the fable of how the fox rid himself of fleas, he slowly immersed himself. He had a hope that the insects would climb up his body as the water came towards them and that when he had ducked his head, they would be left to shift for themselves.

His head went under, and he held his breath while he counted one hundred and eighty seconds. Then he lifted his head above the water. He didn't see the collection of insects floating before his nose that he had expected. But the lice must have gone somewhere, for he no longer was being bitten.

Then he tried to pull the egg away from his skin and allow the water to soften the glue. But he had no success.

"It's as if it had put out tendrils into my skin," he said.

His eyes widened, and he paled. "Good St. Jairus! Maybe that's what *did* happen!"

He forced himself to push back the rising panic and to think, if not calmly, at least coherently. Perhaps the horowitz had egg-laying habits analogous to that of the wasp. It might be its instinct to place the egg on a corpse or even living creature. And the egg might send forth small fleshy roots to hook into the bloodstream of its host. And through the roots it would draw the nourishment it needed to grow larger and to develop into an embryo. The horowitz might have taken an evolutionary step which would place it among placental creatures, the difference being that the embryo would develop on the *outside* of the body of its host instead of *inside*.

Brer John didn't feel much like taking a strictly biological and zoological attitude. This thing attached to his body was a monstrous leech, and it was sucking the blood from him.

It might not be necessarily fatal. And he could kill the egg now, and, presumably, the roots would dissolve.

But there was the ethical view to consider. The egg was not his property to dispose of as he wished. It belonged to the zoo.

Brer John squelched his desire to rip out the thing by the bloody tendrils and to throw it away as far as possible. He must return it to the zoo authorities. Even if that would involve much time while he told the long and complex story of just how he had happened to be in a situation where he could have an egg laid on him.

He scrambled back up the bank. And stood dismayed. His robe was gone.

Brer John had always thought of himself as a strong man. But tears ran down his cheeks, and he groaned, "Worse and worse! Every step I take towards Wildenwooly

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puts me back two steps! How will I ever get out of this mess?"

He looked up at the sky. No sky, just a blaze of light from a man-made roof. Light but no revelation.

He thought of the motto of the order of St. Jairus. *Do as he would do.*

"Yes, but he was never in such a situation!" he said aloud.

However, he thought, consideration of the life of St. Jairus did show that he had always taken the lesser of two evils, unless doing so might lead to an evil even greater than the one rejected. In which case one chose the greater evil, if one had to choose.

"John," he said to himself, "you are not a philosopher. You are a man of action, however ill-advised that action may be. You have never really thought your way out of a mess. Which is why you may be in this particular one. But you have always trusted to the wisdom of your feeling to extricate yourself. So, act!"

The first thing he had to do was to clothe himself. He could remain nude while he searched the beach for whoever might have stolen his clothes. But he did not think it likely that the thief, or prankster, would be in evidence. And he had no means for covering the egg on his chest. That would lead to an intense curiosity and probable trouble for him before he had gotten far. The cops might be called, he might go to jail. And he would have much explaining to do, not only to the secular authorities but to his superior.

No. He must find clothing. Then he must get money to call the director of the zoo and get rid of the egg. Then, somehow, he must get the money for fare to Wildenwooly.

Cautiously, he pushed back into the bushes. The couple over whom he had stumbled were still there, but they now seemed to be asleep in each other's arms. Muttering under his breath, "Only a loan. I will see you get it back," he reached out and took the man's clothes from the bush on which they hung. Then he retreated to the edge of the bank and put them on.

He found the experience distasteful for several reasons. One, he was giving the police another reason to look for him. Two, when the man woke up, he would be in Brer John's difficult position of getting off the beach and home without his clothes, though, doubtless, he could send the woman after some. Three, the puffkilt he was putting on was covered with garish mustardyellow circles and pink dots. This was not only an esthetic crime in itself but, four, the puffkilt was soiled and smelly. Five, the dickey which he put on his chest was an electric-blue with crystal sequins.

"Horrible taste," said Brer John,

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shuddering. He was aware that he made a ridiculous figure.

"Better than having an egg hanging from our chest," he said, and he set off across the part towards the city.

He intended to enter a public phone booth and there find out the address of the zoo director. Then he would walk to the zoo director's house and tell him about the egg. What would happen then, he told himself, would be up to God and the agile (?) wits of Brer John. But somehow, he must also contrive to get the stolen (borrowed) clothes back to the owner with some recompense.

Brer John walked swiftly towards the edge of the park. He did not look behind him as he passed the white-fleshed bodies and many-colored legs of the beach-people. But he felt what he had not felt for a long time, the prickling frightening half-exhilarating sensation that at any moment the cry of "Stop, thief!" would ring out. And he would be in full flight ahead of the pack.

Not that there was much chance of that. The man had been sleeping too deeply.

"Stop, thief!" rang the cry.

Automatically, Brer John increased his pace, but he did not start running yet. Instead, he pointed dramatically to one side at a man who was running by a happy coincidence away from those beside him.

"There he goes!" he yelled. And the crowd surged around him, running after the innocent who fled when every man was pursuing. Unfortunately, the crowd by Brer John ran into the crowd behind the man who was running after Brer John and the stolen clothes. Somebody pushed somebody, and within two seconds a full-scale brawl had spread through this section of the park.

A cop's whistle blew; a number of men piled upon the cop and bore the metal man under by sheer weight. Brer John decided that now was as good a time as any to run.

He reached the edge of the park and began running through a narrow alley formed by the fences around the small yards of private houses. It was a twisting labyrinthian alley in which he could easily lose any ground pursuit. But a cop's car was scooting overhead towards the riot in the park, so Brer John vaulted over a fence lithely as a cat despite his round-stomached bulk. He landed easily and crouched against the fence, hugging it to avoid observance from the air.

The footsteps of a man running went by the fence and faded into the distance. Brer John smiled, then the smile froze as a low growl came from behind him.

Slowly, he turned his head. He was inside the yard of a typical house. The fence encircled a small

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plot of grass in the center of which was a roofed patio. The patio held a table and a few chairs and a *chaise-longue* and the entrance to the house underneath the ground. No human beings were in evidence, but a dog was very much so. It was a huge Doberman-Pinscher, and it was ready to charge.

Back over the fence went Brer John, the dog so close to him that he felt its jaws clash at the edge of his puffkilt. Then he was running again.

However, after he had spurted for a hundred yards and looked behind him to make sure that the dog hadn't come over the fence after him, he slowed to a fast walk. He saw a public phone booth and made for it. Before he was at its door, a man stepped up to him and seized his elbow.

"Wanta talk to you," he said. "Me can solve all your problems for you in a micro."

Brer John looked at the man closely. He was small and thin and had a ratty face. His legs were painted barber-pole fashion with red and white stripes, his kilt and dickey were sequined with imitation diamonds, and he wore a tricorne hat with a long plume. These were enough to identify him as one of the lower classes; the plastic imitation bone stuck through the septum of his nose marked him at once as a lower-class criminal.

"Me got switches," the man said, meanwhile darting glances from side to side and turning his head like a robin afraid the cat was sneaking up on him. "Heard 'bout ya quick as ya robe was snatched. Heard 'bout the egg, too. That's what wanta talk ta ya 'bout. Ya sell the egg ta me; me sell the egg to a rich beast in Phoenix. Him's queer, get it? Eats, uh, rare delicacies, gets his rockets off. Been vine out long time good zoola horowitz egg. Scratch?"

"Scratch," said Brer John. "You mean a rich man in Phoenix pays big prices for food hard to get, like the ancient Chinese paid high for so-called thousand year old eggs?"

"Scratch. Know ya need ticket to Wildenwooly. Can finger."

"I'm tempted, *friend*," said Brer John. "You would solve my temporal difficulties."

"Do? Buzz-buzz. Only drag is, have to go ta Phoenix first. Slice egg off here, no buzz-buzz. Egg rigor mortis; no carry from fat beast."

"You tempt me, *friend*," said Brer John. "But, fortunately I remember that I will also have eternal difficulties if I deal with you. Moreover, this egg so fondly clutching my breast is not my property. It belongs to the zoo."

The man's eyes narrowed. "No buzz-buzz. Come anyway."

He pulled a whistle from a pocket on his puffkilt and blew.

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No sound issued, but three men stepped out from the corner of a tavern. All three held airguns, which doubtless contained darts whose tips were smeared with a paralytic.

Brer John leaped like an uncoiling rattler striking. The ratty little man squawked with terror, and his hand darted towards his pocket. But Brer John chopped him into unconsciousness with the edge of his palm, and he thrust the man before him. There was a whacking sound as two darts hit the sagging form. Then Brer John, holding the man into the air before him, managed to run towards the three gunmen. Another dart thwacked into the flesh of his shield, and then he was on them. Or they were on him; it was hard to tell. He went down; he was up; airguns hissed in the air and missed; one man cried out as a dart hit him; another folded as stiff fingers drove into his soft belly; then the butt of a gun came down on Brer John's temple.

Stars . . . blackness.

He woke to find himself lying on a couch in a strange room. And a strange man was looking down at him.

"I protest against this high-handed misuse of a fellow human being," said Brer John. "If you think you can get away with this, you're mistaken. I was once known as John Carmody, the only man who ever gave the famous detective Leopardi the slip. I'll hunt you down and I'll . . . turn you over to the authorities," he ended mildly.

The man smiled and said, "I'm not what you think, Brer John. The crooks who tried to snatch you were caught by a police car immediately after you were knocked out. They were injected, and they made a full confession. And you were injected, too. We know the full story. A most amazing one, too, and I've heard some weird ones."

Brer John sat up and felt dizzy. The man said, "Take it easy. Allow me to introduce myself. I'm John Richards, the director of the zoo."

Brer John felt at his chest. The egg was still attached.

"Wait a minute," he said. "The horowitz has a parrot's mimicking powers. Just as a guess, you taught it to call you by your name, John? Scratch? I mean, right?"

"Right," said John Richards. "And if it'll make you feel any better, I can solve your problem."

"The last time I heard that, I almost got kidnapped," said Brer John. But he smiled. "All right. What is this solution?"

"Just this. We have been waiting for a long time for the horowitz to lay its egg; we even had a host animal ready. Your appearance upset everything. But it doesn't necessarily ruin everything. If you would be willing to sign a

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contract to go to Feral, the native planet of the horowitz, and there allow yourself to be studied until the egg fully develops, then—"

"You give me hope, Mr. Richards. But there is something about your tone I don't like. What will this involve? Especially how much time will it take?"

"We—the Feral Study Grant group—would like you to go to Feral and there live as one of them while—"

"As one of them? How? They'd kill me!"

"Not at all. They don't kill the host animal until after the embryo is—uh—born. But we would step in just before that time. You'll be under close observance all the time. I wouldn't try to deceive you into thinking it couldn't involve danger. But if you agree, you'll be doing science a marvelous service. You can give us a much more detailed, and personal, account than we could get by watching through long-distance scopes.

"And, Brer John, at the end of your service, we'll guarantee you immediate passage to Wildenwooly. Plus a substantial contribution to your order there."

"How long will it be before I get to Wildenwooly?"

"About four months."

Brer John closed his eyes. Richards could not tell if he were praying or thinking. Probably, he decided, it was both.

Then Brer John opened his eyes, and he smiled. "If I took a job on Earth, I'd have to work two years to pay for the passage. I might be able to do something else, but offhand I can't think of anything. And from the strange course of events, I think I was *led* into that moat and thence into your hands. At least, I choose to think so.

"I'll go to Feral for four months. The best route is not necessarily the straightest one. Success in circuit lies."

Brer John was sitting in the waiting room of the spaceport, meditating and also thanking God that the loose robe of his order allowed the egg attached to his breast to be well hidden. Within a few minutes a bell would sound, and it would be time to board the *Rousehound*.

A man came in, placed his traveling bag on the floor, and sat down next to him. The man fidgeted a while, looking at Brer John every now and then. Brer John smiled whenever his eye was caught, and he said nothing. He was learning the value of silence. Presently, the man said, "Going frontier, Father?"

"Call me Brer," said Brer John. "I am not a priest but a lay brother. Yes, I am going frontier. To Wildenwooly."

"Wildenwooly? Me, too! Thank God, I'll be off Earth! What a dull restricted place! Nothing exciting ever happens here. Same old in-

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and-out, up-and-down, day after day. Now, you take Wildenwooly! There's a place calling to every red-blooded freedom-loving adventurous man! Why, I understand you can't walk more than a mile or two before more strange and wonderful things happen to you than in a lifetime on this grey globe."

"Bless you!" said Brer John.

The man looked at the brother and moved away. He never did understand why Brer John's face turned red and his hand doubled up as if to strike a blow.

EDITOR'S NOTE: *We are regretful that we must leave Brer John while he remains attached to that egg. However, Philip José Farmer promises early word concerning events on Feral. We recommend to you the virtue of patience . . . and suggest keeping a watchful eye on these pages.*

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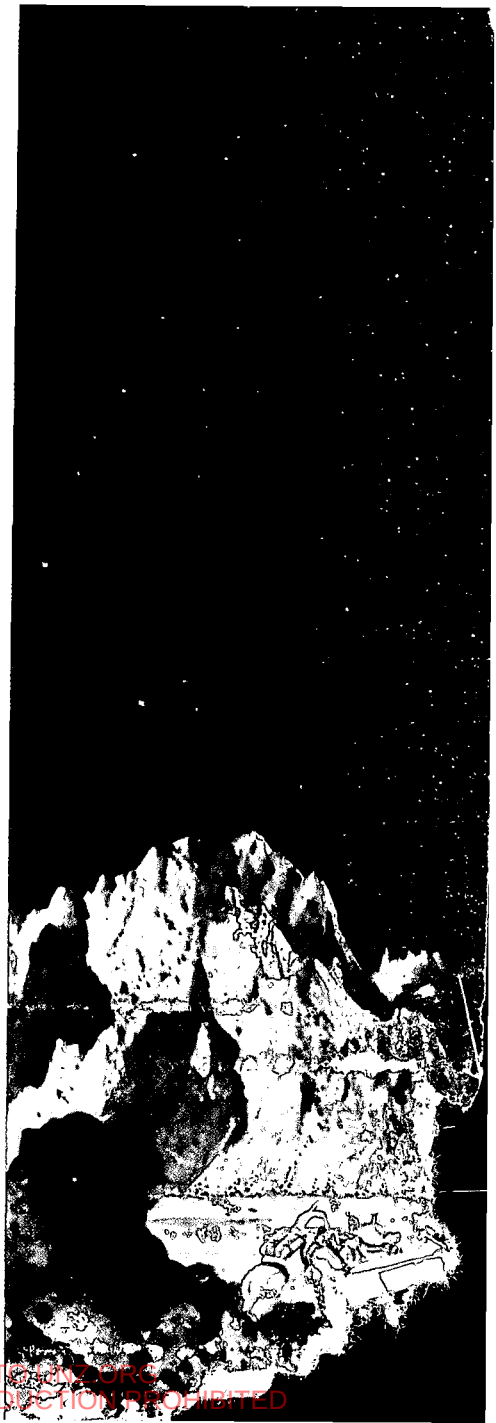

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